

SEQUENCE LISTING

(1) GENERAL INFORMATION:

(iii) NUMBER OF SEQUENCES: 207

(2) INFORMATION FOR SEQ ID NO: 1:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 327 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

ATGAGCACGA	ATCCTAAACC	TCAAAGAAAA	ACCAAACGTA	ACACCAACGG	CGGCCCTCAK	60
GGSGTNNNNN	NNCCGGGTGG	CGGTACAGATC	GTTGGTGGAG	TTTACCTGTT	GCCGGCGCAGG	120
GGCCCCAGGN	NGGGTGTGCG	CGCGACTAGG	AAGACTTCCG	AGCGGTACACA	ACCTCGTGCC	180
AGGCACAGC	CTATCCCCAA	GGCTCGYCGG	YCCGAGGGCA	GGTCCTGGGC	TCAGCCCGGG	240
TATCCCTTGGC	CCCTCTATGG	CAATGAGGGC	TGCGGGTGGG	CGGGNTGGCT	CCTGTCCCCC	300
CGCGGCTCTC	GGCCCCATTG	GGGGCCCC				327

(2) INFORMATION FOR SEQ ID NO: 2:

(i) SEQUENCE CHARACTERISTICS:

SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 109 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:

Met	Ser	Thr	Asn	Pro	Lys	Pro	Gln	Arg	Lys	Thr	Lys	Arg	Aen	Thr	Asn
1				5					10					15	
Arg	Arg	Pro	Xaa	Xaa	Xaa	Xaa	Pro	Gly	Gly	Gly	Gln	Ile	Val	Gly	
			20				25					30			
Gly	Val	Tyr	Leu	Leu	Pro	Arg	Arg	Gly	Pro	Arg	Xaa	Gly	Val	Arg	Ala
			35			40						45			
Thr	Arg	Lys	Thr	Ser	Glu	Arg	Ser	Gln	Pro	Arg	Gly	Arg	Arg	Gln	Pro
			50			55						60			
Ile	Pro	Lys	Ala	Xaa	Arg	Xaa	Glu	Gly	Arg	Ser	Trp	Ala	Gln	Pro	Gly
			65			70					75			80	
Tyr	Pro	Trp	Pro	Leu	Tyr	Gly	Asn	Glu	Gly	Cys	Gly	Trp	Ala	Xaa	Trp
				85				90					95		
Leu	Leu	Ser	Pro	Arg	Gly	Ser	Arg	Pro	Asn	Trp	Gly	Pro			
			100				105								

(2) INFORMATION FOR SEQ ID NO: 3:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 447 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:

GACGGCGTGA ACTATGCAAC AGGGAACCTTG CCCGGTTGCT CTTTCTCTAT CTTGCTCTTG	60
GCTTGTGCTGT CCTGCTTGAC GGTGCTCAACK ACCGCTCAGG AGGTGCCCAA CGCATCCGG	120
GTGTATCATG TCACCAACGA CTGTTCCAAC TCGAGCATCA TCTATGAGAT GGACGGTATG	180
ATCATGCCACT ACCCAGGGTG CGTGCCCTGC GTTCGGGAGG ATAACCATCT CCGCTGCTGG	240
ATGGCGCTCA CCCCCACGCT TGCGGTCAA AAYGCTAGTG TCCCCACTRC GGCAATCCGA	300
CGTCACGCTCG ACTTGCTGTG TGGGGNNCC ACGTTCTGTT CCGCTATGTA CGTGGGRGAC	360
CTTGCGGGT CTGCTTCTCG CTGCTGGCAG CTATTCACT TTTCACCCCG CATGCACCAT	420
ACACACGCAGG AGTGCAACTG CTCAATC	447

(2) INFORMATION FOR SEQ ID NO: 4:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 149 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:

Asp	Gly	Val	Asn	Tyr	Ala	Thr	Gly	Asn	Leu	Pro	Gly	Cys	Ser	Phe	Ser
1															
															15
Ile	Phe	Leu	Leu	Ala	Leu	Leu	Ser	Cys	Leu	Thr	Val	Pro	Xaa	Thr	Ala
															30
His	Glu	Val	Arg	Asn	Ala	Ser	Gly	Val	Tyr	His	Val	Thr	Asn	Asp	Cys
															45
Ser	Asn	Ser	Ser	Ile	Ile	Tyr	Glu	Met	Asp	Gly	Met	Ile	Met	His	Tyr
															50
															55
															60
Pro	Gly	Cys	Val	Pro	Cys	Val	Arg	Glu	Asp	Asn	His	Leu	Arg	Cys	Trp
															65
															70
															75
															80
Met	Ala	Leu	Thr	Pro	Thr	Leu	Ala	Val	Lys	Xaa	Ala	Ser	Val	Pro	Thr
															85
															90
															95
Kaa	Ala	Ile	Arg	Arg	His	Val	Asp	Leu	Leu	Val	Gly	Xaa	Xaa	Thr	Phe
															100
															105
															110
Cys	Ser	Ala	Met	Tyr	Val	Xaa	Asp	Leu	Cys	Gly	Ser	Val	Phe	Leu	Ala
															115
															120
															125
Gly	Gln	Leu	Phe	Thr	Phe	Ser	Pro	Arg	Met	His	His	Thr	Thr	Gln	Glu
															130
															135
															140
Cys	Asn	Cys	Ser	Ile											
															145

(2) INFORMATION FOR SEQ ID NO: 5:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 327 base pairs

(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(iii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:

ATGAGCACGA	AICCTAAACC	TCAAAGAAAA	ACCAAACTGA	ACACCCACCG	CGCCCCACAG	60
GACGTCAAGN	TCCCAGGTGG	TGGTCAGATC	GTTGGTGGAG	TTTACCTGTT	GCCCCGAGG	120
GGCCCCAGGT	TGGGTGTGCG	CGCGACCAGG	AAGACTTCGG	AGCGGTCGCA	GCCTCGTGAC	180
AGCCGACAGC	CTATTCCTAA	GGCTGCCAG	TCCGATGGCA	GNNCCTGGC	TCAGCCACGG	240
CATCCCTGGC	CCCTCTATGG	CAATGAGGGC	TGCGGATGGG	CGGGATGGCT	CCTGTCCCCC	300
CCCCGGCTCTC	GGCCCAGTTG	GGCCCC				327

(2) INFORMATION FOR SEQ ID NO: 6:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 109 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(iii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:

Met	Ser	Thr	Asn	Pro	Lys	Pro	Gln	Arg	Lys	Thr	Lys	Arg	Asn	Thr	Asn	
1																
																15
Arg	Arg	Pro	Gln	Asp	Val	Lys	Xaa	Pro	Gly	Gly	Gly	Gln	Ile	Val	Gly	
																20
																25
Gly	Val	Tyr	Leu	Leu	Pro	Arg	Arg	Gly	Pro	Arg	Leu	Gly	Val	Arg	Ala	
																35
																40
Thr	Arg	Lys	Thr	Ser	Glu	Arg	Ser	Gln	Pro	Arg	Asp	Arg	Gln	Pro		45
																50
Ile	Pro	Lys	Ala	Arg	Gln	Ser	Asp	Gly	Xaa	Xaa	Trp	Ala	Gln	Pro	Gly	
																65
																70
																75
																80
His	Pro	Trp	Pro	Leu	Tyr	Gly	Asn	Glu	Gly	Cys	Gly	Trp	Ala	Gly	Trp	
																85
																90
Leu	Leu	Ser	Pro	Arg	Gly	Ser	Arg	Pro	Ser	Trp	Gly	Pro				100
																105

(2) INFORMATION FOR SEQ ID NO: 7:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 447 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(iii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:

GACGGCGTGA	ACTATGCAAC	AGGGAAATTG	CCTGGTTGCT	CTTTCTCTAT	CTTCCTCTTA	60
GCTTTCTGT	CCTGCTTGAC	GGTTCCAAT	ACCGCTCATG	AGGTGCCAA	CGCATCCGG	120
GTATATCATC	TCACCAATGA	CTGTTCAAC	TCGAGCATCA	TCTATGAGAT	GAGTGGTATG	180

ATCTTGCAAG CCCCAGGGTG TGTGCCCCGC GTTCGGGAGA ACRACTCTTC TCGTTGCTGG	240
ATGCCRCTCA CCCCCACGCT TCCGGTCAAA GACGCTAATG TCCCTACTGC GGCAATCCGA	300
CGCCCATGTCG ACTTGCTGGT TGGGACAGCC GCGTTTCGTT CCGCTATGTA CGTGGGGGAC	360
CTCTCGGGAT CCGTCTTCCT TGTCCGGCAG CTATTCACTT TTTCACCCCG CTTGTACCAT	420
ACAAACACAGG AGTGCAACTG CTCAATC	447

(2) INFORMATION FOR SEQ ID NO: 8:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 149 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:

Asp Gly Val Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser	
1 5 10 15	
Ile Phe Leu Leu Ala Phe Leu Ser Cys Leu Thr Val Pro Thr Thr Ala	
20 25 30	
His Glu Val Arg Asn Ala Ser Gly Val Tyr His Leu Thr Asn Asp Cys	
35 40 45	
Ser Asn Ser Ser Ile Ile Tyr Glu Met Ser Gly Met Ile Leu His Ala	
50 55 60	
Pro Gly Cys Val Pro Cys Val Arg Glu Asn Asn Ser Ser Arg Cys Trp	
65 70 75 80	
Met Xaa Leu Thr Pro Thr Leu Ala Val Lys Asp Ala Asn Val Pro Thr	
85 90 95	
Ala Ala Ile Arg Arg His Val Asp Leu Leu Val Gly Thr Ala Ala Phe	
100 105 110	
Arg Ser Ala Met Tyr Val Gly Asp Leu Cys Gly Ser Val Phe Leu Val	
115 120 125	
Gly Gln Leu Phe Thr Phe Ser Pro Arg Leu Tyr His Thr Thr Gln Glu	
130 135 140	
Cys Asn Cys Ser Ile	
145	

(2) INFORMATION FOR SEQ ID NO: 9:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 223 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:

ATGAGCACGA ATCCTAAACC TCAAAGAAAA ACCAAAAGAA ACACCAACCG CCGCCCAACAG	60
GACGTCAAGT TCCCGGGCGG TGGCCAGATC GTTGGTGCAG TCTACGTGCT ACCGGCGAGG	120
GGCCCTAGAT TGGGTGTGCG CGCAGCGCGG AAGACTTCGG ACCGGTGCAC ACCTCGTGGG	180
AGCGGCCAAC CTATTCCCAA GGAGCGCCGA CCCGAGGGCA GGT	223

(2) INFORMATION FOR SEQ ID NO: 10:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 74 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:

Met Ser Thr Asn Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn
1 5 10 15

Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gln Ile Val Gly
20 25 30

Gly Val Tyr Val Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
35 40 45

Ala Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
50 55 60

Ile Pro Lys Glu Arg Arg Pro Glu Gly Arg
65 70

(2) INFORMATION FOR SEQ ID NO: 11:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 957 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:

ATGAGCAGCA ATCCTAAACC TCRAAGAAAA ACCAAACGCA ACACCAACCG CCGCCACAG 60
GACGTTAAAT TCCCGGTGG GGGCCAGATC GTGGGTGGAG TTTACTTGTGTT GCGCGCAGG 120
GGCCCAGGT TGGGTGTGG CGCGACGAGG AAGACTTCGG AGCGGTCGCA ACCTCGCGGA 180
AGGGCACAGC CTATCCCCAA GGCTCGCCGA CCCGAGGGCA GGTCCCTGGGC TCAGCCTGGG 240
TACCCATGGC CCCTCTATGC TAACGAGGGC TGCGGATGGG CGGGATGGCT CCTGTCCCC 300
CCGGGCTCCC GTCTCTAGTG GGGCCCCAAT GACCCCCCGAC GTAGATCACG CAATTTGGGT 360
AAGGTCATCG ATACCTAAC GTGTGGCTTC GCGGATCTCA TGGGGTACAT TCCGCTCGTC 420
GGGGCCCCCC TAGGGGGCGC TTCCAGAACG CTGNACATG GTGTCCGGGT CCTGGNAGGC 480
GGCGTGATNN NNNNNNNNNN NAACCTTCNN GGTTGCTCTT TNNTATCTT CCTCTTGGCN 540
TTACTCTCTT GCCTCACAGT CCCCACCTCT GCCTATGAGG TGACACAGC AACCGATGGC 600
TACCATGTCA CTAATGACTG TTCCAACGGC AGCATCGTAT ATGAGGCAAA GGACATCATC 660
CTTCACACGC CTGGGTGNGT GCCCTGATA CGGGAAAGGCA ATATCTCCG TTGCTGGGT 720
CCGCTCACCC CCACGCTCGC AGCGCGGATC GCGAACCGCTC CCATCGATGA GGTGCGCGGT 780
CACGTGACCC CGCTCGTGGG GGCAGCGCTG TTCTGCTAG CCATGTACAT TGGGGACCTT 840
TGTGGGGCGC TCTTCCTCGT TGGGCAATTG TTACCTTCA CGTCCCCCGC GCATGGACCG 900
GTGCAGGACT GTAATTGTTG CATTACTCTT GGCCACATAA CGGGCACACCG NNNNNNNN 957

(2) INFORMATION FOR SEQ ID NO: 12:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 319 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:

Met Ser Thr Asn Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn
1 5 10 15

Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gln Ile Val Gly
20 25 30

Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
35 40 45

Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
50 55 60

Ile Pro Lys Ala Arg Arg Pro Glu Gly Arg Ser Trp Ala Gln Pro Gly
65 70 75 80

Tyr Pro Trp Pro Leu Tyr Ala Asn Glu Gly Cys Gly Trp Ala Gly Trp
85 90 95

Leu Leu Ser Pro Arg Gly Ser Arg Pro Ser Trp Gly Pro Asn Asp Pro
100 105 110

Arg Arg Arg Ser Arg Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Cys
115 120 125

Gly Phe Ala Asp Leu Met Gly Tyr Ile Pro Leu Val Gly Ala Pro Leu
130 135 140

Gly Gly Ala Ser Arg Thr Leu Xaa His Gly Val Arg Val Leu Xaa Gly
145 150 155 160

Gly Val Xaa Xaa Xaa Xaa Asn Leu Xaa Gly Cys Ser Xaa Xaa Ile
165 170 175

Phe Leu Leu Xaa Leu Leu Ser Cys Leu Thr Val Pro Thr Ser Ala Tyr
180 185 190

Glu Val His Ser Thr Thr Asp Gly Tyr His Val Thr Asn Asp Cys Ser
195 200 205

Asn Gly Ser Ile Val Tyr Glu Ala Lys Asp Ile Ile Leu His Thr Pro
210 215 220

Gly Xaa Val Pro Cys Ile Arg Glu Gly Asn Ile Ser Arg Cys Trp Val
225 230 235 240

Pro Leu Thr Pro Thr Leu Ala Ala Arg Ile Ala Asn Ala Pro Ile Asp
245 250 255

Glu Val Arg Arg His Val Asp Leu Leu Val Gly Ala Ala Val Phe Cys
260 265 270

Ser Ala Met Tyr Ile Gly Asp Leu Cys Gly Gly Val Phe Leu Val Gly
275 280 285

Gln Leu Phe Thr Phe Thr Ser Arg Arg His Trp Thr Val Gln Asp Cys
290 295 300

Asn Cys Ser Ile Tyr Ser Gly His Ile Thr Gly His Xaa Xaa Xaa
305 310 315

(2) INFORMATION FOR SEQ ID NO: 13:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 310 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:

ATGAGCACAA ATCCTAAACC TCAAGAAAA ACCAAAAGAA ATACCAACCG CCGCCCCACAG	60
GACGTCAAGT TCCCCGGCGG CGGCCAGATC GTTGGCGGAG TTACTTGTGTT GCGCGCAGG	120
GGCCCCAGAT TGGGTGTGCG CGCGACGAGA AAGACTTCTG AACGGTCCCA GCCACGTGGA	180
AGGCGCCAGC CCATCCCTAA AGATCGGNGN GCCACTGGCA GGTCCCTGGG AGTCCAGGA	240
TATCCCTGGC CCCTGTATGG GAACGAGGGG CTCGGCTGGG CAGGATGGCT CCTGTCCCC	300
CGAGGCTCTC	310

(2) INFORMATION FOR SEQ ID NO: 14:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 108 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:

Met Ser Thr Asn Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn	
1 5 10 15	
Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gln Ile Val Gly	
20 25 30	
Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala	
35 40 45	
Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro	
50 55 60	
Ile Pro Lys Asp Arg Xaa Ala Thr Gly Arg Ser Trp Gly Arg Pro Gly	
65 70 75 80	
Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Leu Gly Trp Ala Gly Trp	
85 90 95	
Leu Leu Ser Pro Arg Gly Ser Arg Pro Ser Trp Gly	
100 105	

(2) INFORMATION FOR SEQ ID NO: 15:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 579 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:

ACGTGGCGNT NTCCCGACCT CATGGGGTAC ATNCCCGTTG TCGGGCCCCC GGTGGGGGG	60
GTNGCCAGGG CCCTCGCGNA TGGCGTGCAG GTCTGGAGG ACGGGATAAA TTATGNAACA	120
GGAAACCTCC CTGGTTGCTC CTTTCTATC TTCTNGTGG CTCTTCGTGTC TTGTGTCACC	180
GTGCCCTGTCT CTGNCGGTGA GGTCAAAAT ACCAGTCAGG CCTATATGGC AACCAACGAC	240
TGCTCCAACA ACAGCATCGT ATGCCAATTG GNGGACGGGG TGCTTCATGT TCCTGGATGT	300
GTCCCCCTGCG AGAATAGCTC CGGTGGTTC CACTGTTGGA TCCCGATCTC GCCCAACATA	360

GCCGTGAGCA AACCTGGTGC TCTCACCAAG GGACTGGGG CACGCATGTA TGCCGTG	420
ATGTCGGCCA CCCCTCTGCTC TGGCCTGTAC GTGGGAGATG TGTGGGGCGC AGTGATGATA	480
GCTGCACAGG CTTTCATCGT GGCACCGAAG CGCCATTACT TCGTCCAGGA ATGCAATTGC	540
TCCATATACC CAGGCCACAT TACAGGTCA CGCATGGCG	579

(2) INFORMATION FOR SEQ ID NO: 16:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 193 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 16:

Thr Cys Xaa Xaa Ala Asp Leu Met Gly Tyr Xaa Pro Val Val Gly Ala			
1	5	10	15
Pro Val Gly Gly Xaa Ala Arg Ala Leu Ala Xaa Gly Val Arg Val Leu			
20	25	30	
Glu Asp Gly Ile Asn Tyr Xaa Thr Gly Asn Leu Pro Gly Cys Ser Phe			
35	40	45	
Ser Ile Phe Xaa Leu Ala Leu Leu Ser Cys Val Thr Val Pro Val Ser			
50	55	60	
Xaa Val Glu Val Lys Asn Thr Ser Gln Ala Tyr Met Ala Thr Asn Asp			
65	70	75	80
Cys Ser Asn Asn Ser Ile Val Trp Gln Leu Xaa Asp Ala Val Leu His			
85	90	95	
Val Pro Gly Cys Val Pro Cys Glu Asn Ser Ser Gly Arg Phe His Cys			
100	105	110	
Trp Ile Pro Ile Ser Pro Asn Ile Ala Val Ser Lys Pro Gly Ala Leu			
115	120	125	
Thr Lys Gly Leu Arg Ala Arg Ile Asp Ala Val Val Met Ser Ala Thr			
130	135	140	
Leu Cys Ser Ala Leu Tyr Val Gly Asp Val Cys Gly Ala Val Met Ile			
145	150	155	160
Ala Ala Gln Ala Phe Ile Val Ala Pro Lys Arg His Tyr Phe Val Gln			
165	170	175	
Glu Cys Asn Cys Ser Ile Tyr Pro Gly His Ile Thr Gly His Arg Met			
180	185	190	
Ala			

(2) INFORMATION FOR SEQ ID NO: 17:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 957 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 17:

ATGAGCACAA ATCCTAAACC TCAAAGAAAA ACTAAAAGAA ACACAAACCG TCGCCCACAG	50
GACGTTAAGT TCCCGGGCGG CGGCCAGATC GTTGGGGAG TTTACTTGTT GCCGCGCAGG	120

GGCCCCAGGT TGGGTGTGCG CGCGCCAAGG AAGACTTCTG AACGGTCCCA GCCACGTGGA 180
 AGCGGCCAGC CCATCCAAA AGATCGCGC GCCACTGGCA AGTCCTGGG ACGTCCAGGA 240
 TACCCCTTGGC CCCTGTACGG GAACGAGGGC CTGGCTGGG CAGGGTGGCT CCTGTCCCCC 300
 CGGGGCTCTC GCCCCTCGTG GGGCCAAAC GACCCCCGGC ACAGGTACG CAACTTGGGT 360
 AAGGTCACTG ATACCCCTAC GTGTGGCTT GSCGACCTCA TGGGTACAT ACCTGTCGTC 420
 GGCGCCCTG TGGCGCGGT TGCCAGGCC CTCCGCATG GCGTGCCTGGT CCTGGAGGAC 480
 GGGATAAATT ATGCAACAGG GAACTTGCCC GGTTGCTCTT TTTCTATCTT CTTGCTGGCT 540
 CTCTTGTCTT GTATCACCGT GCCCGTGTCT GCCATACAGG TTAAGAACAA CAGCCACTTC 600
 TACATGGCGA CTAATGACTG TGCCAATGAC AGCATCGTCT GGCAGCTCAG GGACGCCGTG 660
 CTCCATGTC CTGGATGTGT CCCCTGTGAG AGGTCAAGGTA ATAGGACCTT CTGTTGGACA 720
 GCGGTCTCGC CCACAGTGGC TGTGAGCGCA CCTGGTGTCTC TCACTAGAGG TCTGCGGGCT 780
 CACATTGATA CCATCGTGT GTCCGCACCC CTCTGCTCTG CCCTATACAT AGGGGACCTA 840
 TGCGGCCGCTG TGATGATAGC AGCGCAAGTT GCGGTGCTCT CACCGCAATA CCATACTTT 900
 GTCCAGGAAT GCAACTGCTC CATATACCCA GGCCATATCA CAGGACRTCG AATGGNN 957

(2) INFORMATION FOR SEQ ID NO: 18:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 319 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 18:

Met Ser Thr Asn Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn
 1 5 10 15
 Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gln Ile Val Gly
 20 25 30
 Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
 35 40 45
 Pro Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
 50 55 60
 Ile Pro Lys Asp Arg Arg Ala Thr Gly Lys Ser Trp Gly Arg Pro Gly
 65 70 75 80
 Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Leu Gly Trp Ala Gly Trp
 85 90 95
 Leu Leu Ser Pro Arg Gly Ser Arg Pro Ser Trp Gly Pro Asn Asp Pro
 100 105 110
 Arg His Arg Ser Arg Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Cys
 115 120 125
 Gly Phe Xaa Asp Leu Met Gly Tyr Ile Pro Val Val Gly Ala Pro Val
 130 135 140
 Gly Gly Val Ala Arg Ala Leu Ala His Gly Val Arg Val Leu Glu Asp
 145 150 155 160
 Gly Ile Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile
 165 170 175
 Phe Leu Leu Ala Leu Leu Ser Cys Ile Thr Val Pro Val Ser Ala Ile
 180 185 190
 Gln Val Lys Asn Asn Ser His Phe Tyr Met Ala Thr Asn Asp Cys Ala
 195 200 205

Asn Asp Ser Ile Val Trp Gln Leu Arg Asp Ala Val Leu His Val Pro
 210 215 220
 Gly Cys Val Pro Cys Glu Arg Ser Gly Asn Arg Thr Phe Cys Trp Thr
 225 230 235 240
 Ala Val Ser Pro Asn Val Ala Val Ser Arg Pro Gly Ala Leu Thr Arg
 245 250 255
 Gly Leu Arg Ala His Ile Asp Thr Ile Val Met Ser Ala Thr Leu Cys
 260 265 270
 Ser Ala Leu Tyr Ile Gly Asp Leu Cys Gly Ala Val Met Ile Ala Ala
 275 280 285
 Gln Val Ala Val Val Ser Pro Gln Tyr His Thr Phe Val Gln Glu Cys
 290 295 300
 Asn Cys Ser Ile Tyr Pro Gly His Ile Thr Gly His Arg Met Xaa
 305 310 315

(2) INFORMATION FOR SEQ ID NO: 19:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 447 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 19:

GACGGGGTAA ATTATGCAAC AGGGAATCTG CCTGGTTGCT CTTTCTCTAT CTTCTTGTG 60
 GCTCTTCTGT CTTGTGTAC CGTGCCTGTC TCTGCCGTGC AGGTTAAGAA CACAGTACC 120
 ATGTACATGG CAACCAATGA CTGTTCCAC AACAGCATCA TCTGGCAAAT GCAGGGCGCG 180
 GTGCCCTCATG TTCCCTGGATG TGTCCCGTGT GAGTTGCAGG GCAATAAGTC CCGGTGCTGG 240
 ATACCGGTCA CTCCCAACGT GGCTGTGAAC CAGCCCCGCG CCCTCACTAG GGGCTTGCAGG 300
 ACGCACATTG ACACCATCGT GATGGTCGCT ACGCTCTGTT CTGCACCTCA CATCGGGAC 360
 GTGTGTGGCG CGGTGATGAT AGCTGCTCAG GTTGTCAATTG TCTCGCCGCA ACATCACAAAC 420
 TTTTCCCAAGG ATTGCAATTG TTCCATC 447

(2) INFORMATION FOR SEQ ID NO: 20:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 149 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 20:

Asp Gly Val Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser
 1 5 10 15
 Ile Phe Leu Leu Ala Leu Ser Cys Val Thr Val Pro Val Ser Ala
 20 25 30
 Val Gln Val Lys Asn Thr Ser Thr Met Tyr Met Ala Thr Asn Asp Cys
 35 40 45
 Ser Asn Asn Ser Ile Ile Trp Gln Met Gln Gly Ala Val Leu His Val
 50 55 60

Pro Gly Cys Val Pro Cys Glu Leu Gln Gly Asn Lys Ser Arg Cys Trp
 65 70 75 80
 Ile Pro Val Thr Pro Asn Val Ala Val Asn Gln Pro Gly Ala Leu Thr
 85 90 95
 Arg Gly Leu Arg Thr His Ile Asp Thr Ile Val Met Val Ala Thr Leu
 100 105 110
 Cys Ser Ala Leu Tyr Ile Gly Asp Val Cys Gly Ala Val Met Ile Ala
 115 120 125
 Ala Gln Val Val Ile Val Ser Pro Gln His His Asn Phe Ser Gln Asp
 130 135 140
 Cys Asn Cys Ser Ile
 145

(2) INFORMATION FOR SEQ ID NO: 21:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 310 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 21:

ATGAGCACAA ATCCTAAACC TCAAAGAAAA ACCAAAAGAA ACACATAACCG CCGCCCAACAG 60
 GACGTTAAGT TCCCGGGCGG TGGCCAGATC GTTGGCCGAG TATACGTGTT GCGGCSCAGG 120
 GGCCCCCGGT TGGGTGTGCG CGCGACCGAGG AAAACTTCGG AACGGTCCCA GCCACGTGGG 180
 AGCGGCCAGC CCATCCCTAA AGATCGGCGC TCCACTGGCA AATCCTGGGG ACGTCCAGGA 240
 TACCCTTGGC CCCTGTATGG GAACGAGGGC CTTGGTTGGG CAGGATGGCT CTTGTCCCCCT 300
 CGAGGGCTCTC 310

(2) INFORMATION FOR SEQ ID NO: 22:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 48 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 22:

Met Ser Thr Asn Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn
 1 5 10 15
 Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Arg Ser Leu Ala
 20 25 30
 Glu Tyr Thr Cys Ala Arg Arg Gly Lys Leu Arg Arg Ser Ser Met Gly
 35 40 45

(2) INFORMATION FOR SEQ ID NO: 23:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 447 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 23:

GACGGGGATTA	ACTACGGCAAC	AGGGAATCTG	CCCGGTTGCT	CCTTTCTAT	CTTCTTGCTG	60
GCCTTGCTAT	CCTGTCTCAC	TGTGCCGGCG	TCCGCTGTGC	AGGTCAAGAA	CACCGCCAC	120
TCTTATATGG	TGACCAATGA	TTGCTCAAAC	ACGAGCATTG	TCTGGCAGCT	TAAGGATGCT	180
GTGCTTCACG	TCCCTGGATG	TGTTCCATGT	GAGAGGCACCC	AAAATCAGTC	TGGCTGCTGG	240
ATACCTGTGA	CACCCAAATGT	GGCCCTGAGC	CAACCTGGCG	CGCTCACCAAG	GGGTTTGCAG	300
ACGCACATG	ACACCATCGT	TGCGTCTGCT	ACCGTCTGCT	CAGCTTTGTA	TGTGGGGAC	360
TTCTCGGGCG	CACTGATGTT	GGTCTCTCAA	TTTTTCATGA	TCTCCCTCA	GCACCACATC	420
TTCGTCCAGG	ATTGCAACTG	CTCGATA				447

(2) INFORMATION FOR SEQ ID NO: 24:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 149 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 24:

Asp	Gly	Ile	Asn	Tyr	Ala	Thr	Gly	Asn	Leu	Pro	Gly	Cys	Ser	Phe	Ser
1									10						15
Ile	Phe	Leu	Leu	Ala	Leu	Leu	Ser	Cys	Leu	Thr	Val	Pro	Ala	Ser	Ala
		20					25			30					
Val	Gln	Val	Lys	Asn	Thr	Ser	His	Ser	Tyr	Met	Val	Thr	Asn	Asp	Cys
		35					40			45					
Ser	Asn	Ser	Ser	Ile	Val	Trp	Gln	Leu	Lys	Asp	Ala	Val	Leu	His	Val
		50			55		70		60						
Pro	Gly	Cys	Val	Pro	Cys	Glu	Arg	His	Gln	Asn	Gln	Ser	Arg	Cys	Trp
		65			70		75			80					
Ile	Pro	Val	Thr	Pro	Asn	Val	Ala	Val	Ser	Gln	Pro	Gly	Ala	Leu	Thr
		85			90			95							
Arg	Gly	Leu	Arg	Thr	His	Ile	Asp	Thr	Ile	Val	Ala	Ser	Ala	Thr	Val
		100				105				110					
Cys	Ser	Ala	Leu	Tyr	Val	Gly	Asp	Phe	Cys	Gly	Ala	Val	Met	Leu	Val
		115			120			125							
Ser	Gln	Phe	Phe	Met	Ile	Ser	Pro	Gln	His	His	Ile	Phe	Val	Gln	Asp
		130			135			140							
Cys	Asn	Cys	Ser	Ile											
		145													

(2) INFORMATION FOR SEQ ID NO: 25:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 356 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 25:

GACGGGATAA ACTATGCAAC ACGGAACCTG CCTGGTTGCT CCTTTCTAT CTTCTTACTG	60
GCCCTGCTTT CTIGCATCAC CGTGCCGGTC TCTGCCGTGC AAGTTGCAGA CCGCAGTGGT	120
TCTTACATGG TGACCAATGA TTGCTGAAAC ACCAGCATGG TTGGCAGCT CGAGGAGGCC	180
GTCCCTCACG TCCCTGGATG TGTTCCTGTG GAGTGGAGG ACAACACCTC CCGCTGCTGG	240
ATACCGGTCA CCCCTAACAT CGCTGTGAGC CAACCTGGCG CGCTTACCAA GGGCCTGCGG	300
ACACATATIG ACATCAITGT CGCGTCCGCC ACGTTCTGCT CTGCCCTGTA TGTGGG	356

(2) INFORMATION FOR SEQ ID NO: 26:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 118 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 26:

Asp Gly Ile Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser	
1 5 10 15	
Ile Phe Leu Leu Ala Leu Ser Cys Ile Thr Val Pro Val Ser Ala	
20 25 30	
Val Gln Val Ala Asn Arg Ser Gly Ser Tyr Met Val Thr Asn Asp Cys	
35 40 45	
Ser Asn Ser Ser Ile Val Trp Gln Leu Glu Ala Val Leu His Val	
50 55 60	
Pro Gly Cys Val Pro Cys Glu Trp Lys Asp Asn Thr Ser Arg Cys Trp	
65 70 75 80	
Ile Pro Val Thr Pro Asn Ile Ala Val Ser Gln Pro Gly Ala Xaa Thr	
85 90 95	
Lys Gly Leu Arg Thr His Ile Asp Ile Ile Val Ala Ser Ala Thr Phe	
100 105 110	
Cys Ser Ala Leu Tyr Val	
115	

(2) INFORMATION FOR SEQ ID NO: 27:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 310 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 27:

ATGAGCACGA ATCCTAACCC TCAAAGAAAA ACCAACGTA ACACCAACCG CCGCCCCATG	60
GACGTTAAGT TCCCGGGTGG TGGCCAGATC GTTGGCGGAG TTTACTTGTGTT GCGCGCGAGG	120
GGCCCCAGGT TGGGTGTGCG CGCGACTCGG AAGACTTCGG AGCGGTCGCA ACCTCGTGGG	180
AGACGCCAAC CTATCCCCAA GGCGCGTCGA TCCGAGGGAA GGTCCCTGGGC ACAGCCAGGA	240
TATCCATGGC CTCTTTACGG TAATGAGGGT TGGGGTGGG CANNATGGCT CTTGTCCCCC	300
CGCGGTTCTC	310

(2) INFORMATION FOR SEQ ID NO: 28:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 117 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 28:

Met Ser Thr Asn Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn
1 5 10 15

Arg Arg Pro Met Asp Val Lys Phe Pro Gly Gly Gln Ile Val Gly
20 25 30

Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
35 40 45

Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
50 55 60

Ile Pro Lys Ala Arg Arg Ser Glu Gly Arg Ser Trp Ala Gln Pro Gly
65 70 75 80

Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys Gly Trp Ala Xaa Trp
85 90 95

Leu Leu Ser Pro Arg Gly Ser Arg Pro Ser Trp Gly Pro Asn Asp Pro
100 105 110

Arg Arg Arg Ser Arg
115

(2) INFORMATION FOR SEQ ID NO: 29:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 447 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 29:

GACGGGATCA ATTTGCAAC ACGGAACCTC CCCGGTGCT CCTTTCTAT CTTCTCTTG 60
GCACCTCTCT CGTGCCCTGAC TGTCCCCGCT TCGGCCATCA ACTATCGAA TGTCTCGGGC 120
ATTTACTATG TCACCAATGA TTGCCCCGAT TCAAGCATAG TGTATGAGGC CGACCATCAC 180
ATCTTGACCC TCCCAGGTTG CGTGCCCTGC GTGAGAGAGG GGAATCAGTC ACGTTGCTGG 240
GTAGCCCTTA CCCCTACCGT CGCAGGGCCA TACATCGGGC CGCCACTTGA GTCTCTACGG 300
AGTCATGTGG ACTTGATGGT GGGGGCGGCC ACTGTTGTT CAGCCCTTTA CATGGGGAT 360
TTTGTGGY GCTTGTCCCT AGTCGGTCAG ATGTTCTCTT TCCGACCAAG GCGCCACTGG 420
ACTACTCAAG ATTGCAATTG TTCCATC 447

(2) INFORMATION FOR SEQ ID NO: 30:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 149 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 30:

Asp Gly Ile Asn Phe Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser
1 5 10 15
Ile Phe Leu Leu Ala Leu Leu Ser Cys Leu Thr Val Pro Ala Ser Ala
20 25 30
Ile Asn Tyr Arg Asn Val Ser Gly Ile Tyr Tyr Val Thr Asn Asp Cys
35 40 45
Pro Asn Ser Ser Ile Val Tyr Glu Ala Asp His His Ile Leu His Leu
50 55 60
Pro Gly Cys Val Pro Cys Val Arg Glu Gly Asn Gln Ser Arg Cys Trp
65 70 75 80
Val Ala Leu Thr Pro Thr Val Ala Ala Pro Tyr Ile Gly Ala Pro Leu
85 90 95
Glu Ser Leu Arg Ser His Val Asp Leu Met Val Gly Ala Ala Thr Val
100 105 110
Cys Ser Ala Leu Tyr Ile Gly Asp Xaa Cys Xaa Gly Leu Phe Leu Val
115 120 125
Gly Gln Met Phe Ser Phe Arg Pro Arg Arg His Trp Thr Thr Gln Asp
130 135 140
Cys Asn Cys Ser Ile
145

(2) INFORMATION FOR SEQ ID NO: 31:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 447 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 31:

GACGGGATCA ATTATGCAAC ACGGAACCTT CCCGGTTGCT CTTTTCTAT CTTCTCTTG 60
GCACTCCTCT CGTGCCATGAC TGTCCCCGCT TCGGCCATTA ACTACCGCAA CACCTCGGGC 120
ATCTTACACG TCACCAATGA CTGCCCCAAC TCGAGCATAG TTTATGAGGC CGACCACAC 180
ATCTTGACCC TTCCAGGTTG CGTGCCTGCG GTGAGAAGTC GGAATCAGTC ACGTTGCTGG 240
GTGGCCCTTA CTCCCTACCGT CGCAGCGCCA TACATCGGGC CACCGCTTGA GTCTCTGGGG 300
AGTCATGTGG ATCTGATGGT GGGGGCTGCC ACTGTTGCT CAGCCCTTTA CTCGGGGAT 360
TTGTGTGGCG GCTTGTCTT GGTTGGTCAG ATGTTTCTT TCCGACCACG ACGCCACTGG 420
ACTGCCACAGG ATTGCAATTG TTCTATC 447

(2) INFORMATION FOR SEQ ID NO: 32:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 149 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 32:

Asp Gly Ile Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser
1 5 10 15

Ile Phe Leu Leu Ala Leu Leu Ser Cys Leu Thr Val Pro Ala Ser Ala
 20 25 30
 Ile Asn Tyr Arg Asn Thr Ser Gly Ile Tyr His Val Thr Asn Asp Cys
 35 40 45
 Pro Asn Ser Ser Ile Val Tyr Glu Ala Asp His His Ile Leu His Leu
 50 55 60
 Pro Gly Cys Val Pro Cys Val Arg Thr Gly Asn Gln Ser Arg Cys Trp
 65 70 75 80
 Val Ala Leu Thr Pro Thr Val Ala Ala Pro Tyr Ile Gly Ala Pro Leu
 85 90 95
 Glu Ser Leu Arg Ser His Val Asp Leu Met Val Gly Ala Ala Thr Val
 100 105 110
 Cys Ser Ala Leu Tyr Ile Gly Asp Leu Cys Gly Gly Leu Phe Leu Val
 115 120 125
 Gly Gln Met Phe Ser Phe Arg Pro Arg Arg His Trp Thr Ala Gln Asp
 130 135 140
 Cys Asn Cys Ser Ile
 145

(2) INFORMATION FOR SEQ ID NO: 33:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 447 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 33:

GACGGGATTA ATTATGCAAC AGGGAATCTT CCCGGTTGCT CCTTTTCTAT CTTCTCTTTC 60
 GCACTTCTCT CGTGCCTGAC TGTCCCCGCT TCGGCCATTAA ACTACCACAA CACCTCGGGC 120
 ATCTATCATA TCACCAACGA CTGCCCCAAT TCAAGCATAG TGTATGAGGC CGACCAATCAC 180
 ATCTTGATC TCCCAGGTTG CGTGCCTGTC GTGAGAGTGG GGAATCAGTC GAGTTGCTGG 240
 GTGGCCCTTA CCCCTACCAT CGCAGCCCCA TACATCGGGC CACCGCTTGA GTCTTCGG 300
 AGTCATGTGG ATCTGATGGT GGGGGGGGCC ACTGTCTGTT CAGCCCTTTA CATCGGGGAT 360
 TTGTGTGGCG GTGCGTTCTT GGTTGGTCAG ATGTTCTCTT TCCGACCACG GCGCCACTGG 420
 ACCACCCAAG ATTGCAACTG CTCCATC 447

(2) INFORMATION FOR SEQ ID NO: 34:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 149 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 34:

Asp Gly Ile Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser
 1 5 10 15
 Ile Phe Leu Leu Ala Leu Leu Ser Cys Leu Thr Val Pro Ala Ser Ala
 20 25 30

Ile Asn Tyr His Asn Thr Ser Gly Ile Tyr His Ile Thr Asn Asp Cys
 35 40 45
 Pro Asn Ser Ser Ile Val Tyr Glu Ala Asp His His Ile Leu His Leu
 50 55 60
 Pro Gly Cys Val Pro Cys Val Arg Val Gly Asn Gln Ser Ser Cys Trp
 65 70 75 80
 Val Ala Leu Thr Pro Thr Ile Ala Ala Pro Tyr Ile Gly Ala Pro Leu
 85 90 95
 Glu Ser Leu Arg Ser His Val Asp Leu Met Val Gly Ala Ala Thr Val
 100 105 110
 Cys Ser Ala Leu Tyr Ile Gly Asp Leu Cys Gly Gly Ala Phe Leu Val
 115 120 125
 Gly Gln Met Phe Ser Phe Arg Pro Arg Arg His Trp Thr Thr Gln Asp
 130 135 140
 Cys Asn Cys Ser Ile
 145

(2) INFORMATION FOR SEQ ID NO: 35:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 447 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 35:

GACGGGATCA ATTATGCAAC AGGGAATTATT CCCGGTTGCT CYTTTTCTAT CTTCCCTTYTG	60
GCACCTCTCT CGTGTCTGAC TGTCCCCGCT TCGGCCACTA ACTATGCCAA CGTCTCGGGC	120
ATCTACCATG TCACCAATGA CTGCCCCGAA TCAAGCATAG TGTATGAGGC CGACCATCAC	180
ATCTTAGCAC TTCCAGGTTG CGTGCCTGTC GTGAGAGTGG GGAACCAGTC ACGCTGCTGG	240
GTGGCCCTTA CCCCTACCGT CGCAGGCCA TACACCCGGG CGCCCGTTGA GTCCCTGCGG	300
AGTCATGTGG ATCTGATGGT GGGAGCTGCC ACTGTTTGTGTT CAGCCCTTTA CATCGGGGAY	360
TTGTGTGGCG GCTTGTCTTT GGTTGGTCAG ATGTTCTCTT TYCAGCCTCG GCGCCACTGG	420
ACTACCCAGG ATTGCAATTG TTCCATC	447

(2) INFORMATION FOR SEQ ID NO: 36:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 149 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 36:

Asp Gly Ile Asn Tyr Ala Thr Gly Asn Ile Pro Gly Cys Xaa Phe Ser	
1 5 10 15	
Ile Phe Leu Xaa Ala Leu Leu Ser Cys Leu Thr Val Pro Ala Ser Ala	
20 25 30	
Thr Asn Tyr Arg Asn Val Ser Gly Ile Tyr His Val Thr Asn Asp Cys	
35 40 45	
Pro Asn Ser Ser Ile Val Tyr Glu Ala Asp His His Ile Leu Ala Leu	

50	55	60
Pro Gly Cys Val Pro Cys Val Arg Val Gly Asn Gln Ser Arg Cys Trp		
65	70	75
Val Ala Leu Thr Pro Thr Val Ala Ala Pro Tyr Thr Ala Ala Pro Leu		
85	90	95
Glu Ser Leu Arg Ser His Val Asp Leu Met Val Gly Ala Ala Thr Val		
100	105	110
Cys Ser Ala Leu Tyr Ile Gly Xaa Leu Cys Gly Gly Leu Phe Leu Val		
115	120	125
Gly Gln Met Phe Ser Xaa Gln Pro Arg Arg His Trp Thr Thr Gln Asp		
130	135	140
Cys Asn Cys Ser Ile		
145		

(2) INFORMATION FOR SEQ ID NO: 37:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 447 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 37:

GACGGGATTA ATTATGCAAC AGGGAACTC CCCGGTTGCT CTTTTCTAT CTTCTCTTG	60
GCACCTCTCT CGTGCCTGAC TGTCCCCGCT TCGGCCACCA ACTACCGCAA TGTCTGGGC	120
ATTTACCATG TCACCAATGA CTGGCCCAAT TCAAGCATAG TGTGGAGGC CGACCACATCAC	180
ATCTTGCACC TTCCAGGATG CGTGCCTGCG GTGAAAGAGG GAAATCATTC ACGCTGCTGG	240
GTGGCCCTTA CCCCTACCGT CGCAGGCCCA TACATGGGG CGCCACTTGA GTCTCTACGG	300
AGTCATGTGG ATGTGATGGT GGGGGCTGCC ACTGTTGTT CAGCCCTTA CATGGGGAT	360
CTCTGGGTG GCTTGGTCTT GGTTGGTCAAGTGTCTT TCCGACCACG GCGCCACTGG	420
ACTACCCAGG AATGCAATTG TTCCATC	447

(2) INFORMATION FOR SEQ ID NO: 38:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 149 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 38:

Asp Gly Ile Asn Tyr Ala Thr Gly Xaa Leu Pro Gly Cys Ser Phe Ser		
1	5	10
Ile Phe Leu Leu Ala Leu Ser Cys Leu Thr Val Pro Ala Ser Ala		
20	25	30
Thr Asn Tyr Arg Asn Val Ser Gly Ile Tyr His Val Thr Asn Asp Cys		
35	40	45
Pro Asn Ser Ser Ile Val Phe Glu Ala Asp His His Ile Leu His Leu		
50	55	60
Pro Gly Cys Val Pro Cys Val Lys Glu Gly Asn His Ser Arg Cys Trp		
65	70	75
		80

Val Ala Leu Thr Pro Thr Val Ala Ala Pro Tyr Ile Gly Ala Pro Leu
 85 90 95
 Glu Ser Leu Arg Ser His Val Asp Val Met Val Gly Ala Ala Thr Val
 100 105 110
 Cys Ser Ala Leu Tyr Ile Gly Asp Leu Cys Gly Gly Leu Phe Leu Val
 115 120 125
 Gly Gln Met Phe Ser Phe Arg Pro Arg Arg His Trp Thr Thr Gln Glu
 130 135 140
 Cys Asn Cys Ser Ile
 145

(2) INFORMATION FOR SEQ ID NO: 39:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 447 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 39:

GACGGGATCA ATTATGCAAC AGGGAACCTC CCCGGTTGCT CTTTCTCTAT CTTCATCCTG	60
GCACTTCTCT CGTGCCTGAC TGTCCCCGCC TCGGCTCAGC ATTATCGGAA TGTCTCGGGC	120
ATTTTACCAACG TCACCAACGA CTGCCCGAAC TCCAGCATAG TGTATGAGTC CGACCCATCAC	180
ATCTTACACC TACCAAGGTG TGTACCCCTGT GTGAAGACTG GGAACACTTC GCGCTGCTGG	240
GTGGCCCTTAA CACCTACCGT GGCGCGCCCGC ATACTTTCGG CTCCACTTAT GTCCGTACGG	300
CGGCATGTGG ATCTGATGGT GGGTGCAGCT ACCCTATCGT CTGCCCTCTA CGTTGGAGAC	360
CTCTGCCGGG GTGCCCTTCT AGTGGGGCAG ATGTTCACCT TCCAGCCGGC TCGCCACTGG	420
ACTGTCCAAG ACTGCAACTG TTCCATC	447

(2) INFORMATION FOR SEQ ID NO: 40:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 149 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 40:

Asp Gly Ile Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser	
1 5 10 15	
Ile Phe Ile Leu Ala Leu Ser Cys Leu Thr Val Pro Ala Ser Ala	
20 25 30	
Gln His Tyr Arg Asn Val Ser Gly Ile Tyr His Val Thr Asn Asp Cys	
35 40 45	
Pro Asn Ser Ser Ile Val Tyr Glu Ser Asp His His Ile Leu His Leu	
50 55 60	
Pro Gly Cys Val Pro Cys Val Lys Thr Gly Asn Thr Ser Arg Cys Trp	
65 70 75 80	
Val Ala Leu Thr Pro Thr Val Ala Ala Pro Ile Leu Ser Ala Pro Leu	
85 90 95	

Met Ser Val Arg Arg His Val Asp Leu Met Val Gly Ala Ala Thr Leu
 100 105 110
 Ser Ser Ala Leu Tyr Val Gly Asp Leu Cys Gly Gly Ala Phe Leu Val
 115 120 125
 Gly Gln Met Phe Thr Phe Gln Pro Arg Arg His Trp Thr Val Gln Asp
 130 135 140
 Cys Asn Cys Ser Ile
 145

(2) INFORMATION FOR SEQ ID NO: 41:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 957 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 41:

ATGAGCACAC TTCAAARACC CCAAAGAAAA ACCAAAAGAA ATACTAACCG TCGCCCTATG	60
GACGTCAGT TCCCGGGCGG CGGCCAGATC GTTGGTGGAG TTTACTTGTT GCGCGCGAGG	120
GGCCCTCGTT TGGGTGTGCG CGGGACGGAGA AAGACCTCCG AACGGTCCCA GCCTAGAGGC	180
AGGCGCCAGC CCATACCAAA GGTACGCCAG CGGACAGGC GTAGCTGGGG TCAACCCGGC	240
TACCCCTGGC CCCTTTATGG CAACGAGGGC TCGGGATGGG CGGGATGGCT CCTGTCCCCC	300
CGGGGGTCTC GTCTTAATTG GGGCCCCAAC GACCCCGGGC GAAGGTTCCCG CAACTTGGGT	360
AAGGTCATCG ATACCCCTTA ATNCGNCTA GCGCACCTCA TGGGGTACAT CCCTGTCCCTA	420
GGAGGGCCGC TTGGCGCGGT TGCGGCTGCC CTGGCGCATG GCGTTAGGGC AATCGAGGAC	480
GGGGTCAATT ACGAACACAGG GAATCTTCCT CGTTGCTCCT TTTCTATCTT CCTCTTAGCA	540
CTGTTATCGT GCCTCACTAC ACCAGCCTCA GCAATTCAAG TCAAGAACGC CTCTGGGATC	600
TACCATCTTA CCAATGACTG CTCGAACAC ACCATCGTTT TTGAGGGGGA GACCATGATA	660
CTGCATCTTC CAGGTTGTGT CCCATGTATC AAGGCGGGGA ATGACTCAGG ATGTTGGCTC	720
CCTCTCTCCC CCACCTTACG CGTCCCCAAC TCATCACTGC CAATCCACGG GTTTCCCGA	780
CACGTAGACC TCCTCGTTGG GGCAGCGGCA TTTTGTTCGG CCATGTACAT CGGAGACCTC	840
TGTGGTAGACA TAATCTTGGT AGGGCAGCTT TTTACTTCA GGCCTAAGTA CCATCAGGTT	900
ACCCAGGATT GTAATGCTC TATNAACNT GGCCACGTCA CGGGACACAG GATGGCA	957

(2) INFORMATION FOR SEQ ID NO: 42:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 319 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 42:

Met Ser Thr Leu Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn	
1 5 10 15	
Arg Arg Pro Met Asp Val Lys Phe Pro Gly Gly Gln Ile Val Gly	
20 25 30	

Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
 35 40 45
 Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
 50 55 60
 Ile Pro Lys Val Arg Gln Pro Thr Gly Arg Ser Trp Gly Gln Pro Gly
 65 70 75 80
 Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys Gly Trp Ala Gly Trp
 85 90 95
 Leu Leu Ser Pro Arg Gly Ser Arg Pro Asn Trp Gly Pro Asn Asp Pro
 100 105 110
 Arg Arg Arg Ser Arg Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Xaa
 115 120 125
 Xaa Leu Ala Asp Leu Met Gly Tyr Ile Pro Val Leu Gly Gly Pro Leu
 130 135 140
 Gly Gly Val Ala Ala Ala Leu Ala His Gly Val Arg Ala Ile Glu Asp
 145 150 155 160
 Gly Val Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile
 155 170 175
 Phe Leu Leu Ala Leu Leu Ser Cys Leu Thr Thr Pro Ala Ser Ala Ile
 180 185 190
 Gln Val Lys Asn Ala Ser Gly Ile Tyr His Leu Thr Asn Asp Cys Ser
 195 200 205
 Asn Asn Ser Ile Val Phe Glu Ala Glu Thr Met Ile Leu His Leu Pro
 210 215 220
 Gly Cys Val Pro Cys Ile Lys Ala Gly Asn Glu Ser Arg Cys Trp Leu
 225 230 235 240
 Pro Val Ser Pro Thr Leu Ala Val Pro Asn Ser Ser Val Pro Ile His
 245 250 255
 Gly Phe Arg Arg His Val Asp Leu Leu Val Gly Ala Ala Ala Phe Cys
 260 265 270
 Ser Ala Met Tyr Ile Gly Asp Leu Cys Gly Ser Ile Ile Leu Val Gly
 275 280 285
 Gln Leu Phe Thr Phe Arg Pro Lys Tyr His Gln Val Thr Gln Asp Cys
 290 295 300
 Asn Cys Ser Xaa Asn Xaa Gly His Val Thr Gly His Arg Met Ala
 305 310 315

(2) INFORMATION FOR SEQ ID NO: 43:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 957 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 43:

ATGAGCACAC TTCCAAAAAC	CCAAAGAAAA ACCAAAAGAA	ACACCATCCG CCGCCCCACAG	60
GACGTCAAGT TCCCGGGTGG	CGGCCAGATC GTTGGTGGAG	TCTACTTGCT GCGCGCCAGG	120
GCCCCCGCCT TGGGTGTGCG	CGCGACGAGA AAGACTTCTG	AACGGTCCCA GCCCAGAGGT	180
AGGCGCCAAC CAATACCCAA	AGTGCGCCAC CAAACGGGCC	GTACCTGGC CCAGCCCCGG	240

TACCCCTGGC CTCTTTATGG AAATGAGGGC TGIGGTGGG CAGGCTGGCT CCTGTCCCCC 300
 CGGGGCTCTC GCCCAAATG GGGCCCAAAC GACCCCCGGC GGAGGTCCCG CAACTTGGGT 360
 AAGTCATCG ACACCCCTTAC TTGCGGCTTC GCGGACCTCA TGGGGTATAT CCCTGTCGTA 420
 GGGCTCCGW TGGGAGGCCT CGCGGNGGCC TTGGCGCATG GGGTCANGGN CATCGAGGAC 480
 GGNGTAAATT ACGCAACAGN GAATCTTCCC GGNNNGCTCTN TCTCTATCTT NCTCTTGGCA 540
 CTTCCTCTCGT GCCTTACAAC ACCAGCCTCC GCGGCGCATT ATACCAACAA GTCTGGCCTG 600
 TACCATCTCA CCAACGACTG CCCCCAACRG AGCATCGTTT ATGAGGGGAA GACACTGATT 660
 TTGCACTTGC CTGGGTGTGT ACCTTGTTG AAGRTGRACA ATCAATCCCG GTGCTGGGTG 720
 CAGGCCTCCC CGACCCCTGGC AGTGGCGAAC GCGTCTACGC CAGTCACCGG GTTCCGCAA 780
 CATGTGGACA TCATGGTGGG CGCTGCCCCG TTCTGTTCAAG CTATGTTATGT GGGGGACCTG 840
 TGCGGGGGCC TTTTCTCGT TGGACAGCTC TTCACGCTCA GGCCTCGGAT GCATCAGGTT 900
 GTCCAGGAGT GTAATGTTCACTTACA GGGCATATCA CTGGCACACCG AATGGCA 957

(2) INFORMATION FOR SEQ ID NO: 44:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 319 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 44:

Met Ser Thr Leu Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Ile
 1 5 10 15
 Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gln Ile Val Gly
 20 25 30
 Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
 35 40 45
 Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
 50 55 60
 Ile Pro Lys Val Arg His Gln Thr Gly Arg Thr Trp Ala Gln Pro Gly
 65 70 75 80
 Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys Gly Trp Ala Gly Trp
 85 90 95
 Leu Leu Ser Pro Arg Gly Ser Arg Pro Asn Trp Gly Pro Asn Asp Pro
 100 105 110
 Arg Arg Arg Ser Arg Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Cys
 115 120 125
 Gly Phe Ala Asp Leu Met Gly Tyr Ile Pro Val Val Gly Ala Pro Xaa
 130 135 140
 Gly Gly Val Ala Xaa Ala Leu Ala His Gly Val Xaa Xaa Ile Glu Asp
 145 150 155 160
 Xaa Val Asn Tyr Ala Thr Xaa Asn Leu Pro Xaa Xaa Ser Xaa Ser Ile
 165 170 175
 Xaa Leu Leu Ala Leu Leu Ser Cys Leu Thr Thr Pro Ala Ser Ala Ala
 180 185 190
 His Tyr Thr Asn Lys Ser Gly Leu Tyr His Leu Thr Asn Asp Cys Pro
 195 200 205
 Asn Ser Ser Ile Val Tyr Glu Ala Glu Thr Leu Ile Leu His Leu Pro
 210 215 220
 Gly Cys Val Pro Cys Val Lys Xaa Xaa Asn Gln Ser Arg Cys Trp Val

225	230	235	240
Gln Ala Ser Pro Thr Leu Ala Val Pro Asn Ala Ser Thr Pro Val Thr			
245	250	255	
Gly Phe Arg Lys His Val Asp Ile Met Val Gly Ala Ala Ala Phe Cys			
260	265	270	
Ser Ala Met Tyr Val Gly Asp Leu Cys Gly Gly Leu Phe Leu Val Gly			
275	280	285	
Gln Leu Phe Thr Leu Arg Pro Arg Met His Gln Val Val Gln Glu Cys			
290	295	300	
Asn Cys Ser Ile Tyr Thr Gly His Ile Thr Gly His Arg Met Ala			
305	310	315	

(2) INFORMATION FOR SEQ ID NO: 45:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 413 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 45:

ATGAGCACAC	TTCCTAAACC	TCAAAGAAAA	ACCAAAACGAA	ACACCAACCG	TCGCCCCACAG	60
GACGTCAAGT	TCCCCGGTGG	CGGTCAAGATC	GTTGGTGGAG	TTTACTTGTT	GCCGCCAGG	120
GCCCCTCGTT	TGGGTGTGCG	CCCGACGGAGG	AAAACCTCTG	AACGGTCCCA	GCCCAGGGGT	180
AGACGCCAAC	CTATACCGAA	GGTGGCTCAC	CAAACGGGCC	GTACCTGGGC	TCAACCCGGG	240
TACCCCTGGC	CTCTTTATGG	GAATGAGGGT	TGTGGCTGGG	CAGGGTGGCT	CCTGTCCCCC	300
CNCGGCTCTC	GCCCTAATTG	GGGCCCTAAT	GACCCCCGGN	GGAGGTCCCG	CAACCTGGGT	360
AAGGTCAATCG	ATACCCCTTAC	TTGNGGTTTC	GCCGACCTCA	TAGAGTACAT	TCC	413

(2) INFORMATION FOR SEQ ID NO: 46:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 137 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 46:

Met Ser Thr Leu Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn			
1	5	10	15
Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gln Ile Val Gly			
20	25	30	
Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala			
35	40	45	
Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro			
50	55	60	
Ile Pro Lys Val Arg His Gln Thr Gly Arg Thr Trp Ala Gln Pro Gly			
65	70	75	80
Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys Gly Trp Ala Gly Trp			
85	90	95	
Leu Leu Ser Pro Xaa Gly Ser Arg Pro Asn Trp Gly Pro Asn Asp Pro			

100	105	110
Arg Xaa Arg Ser Arg Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Xaa		
115	120	125
Xaa Phe Ala Asp Leu Ile Glu Tyr Ile		
130	135	

(2) INFORMATION FOR SEQ ID NO: 47:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 957 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 47:

ATGAGCACAC TTCCAAAACC CCAAAGAAAA ACCAAAAGAA ACACAAACCG TCGCCCAATG	60
GATGTCAGT TCCCAGGCGG CGGTAGATC GTGGTGGAG TCTACTTGT ACCGCGCAGG	120
GGCCACGTT TGGGTGTGCG CGCGACGAGG AAGACTTCGG AACGGTCCCA GGCGAGAGGT	180
AGGCGCCAA CAATACCCAA GGTGCGCCAG AACCAAGGCC AACCTGGGC TCAGCCTGGG	240
TACCCCTGGC CCCTTTATGG GAACGAGGGC TGCGGCTGGG CGGGGTGGCT CTTGTCCCC	300
CGTGGCTCTC GCGCGACTG GGGNCCCAAT GACCCCCGGN GGAGGTCGG CAACTGGGT	360
AAGGTATCG ACACCCCTCAC TTGGGGCTTC GCGGACTCTA TGGAGTACAT CCCTGTGCGTT	420
GGCGCCCCC TTGGAGGCGT TGCGGCGAA CTGGNACATG GTGTCAGGGC CATCGAGGAC	480
GGGATAAACT ATGCAACAGG GAATCTTCCT GGTTGCTCTT TCTCTATCTT CCWCTTGGCA	540
CTTCTCTCGT GCCTCACAC GCCTGCCTCC GCACTAAACT ATGCTAACAA GTCTGGGCTG	600
TATCATCTAA CCAATGACTG CCCCCATAGC AGCATTGCT ATGAGGGCA TGGCATGATC	660
CTGCATCTCC CGGGTTGCGT CCCCTGGCTG AAGACGGCA ACCTGACCAA GTGTTGGCTG	720
TCCGCTCTCC CGACATTGGC GGTGCGACAAT GCGTCGGTGT CCATCAGGGG TGTCCCGAG	780
CACGTGGACCC TCTTGGTGGG TGCTGCTGGG TTCTGCTCTG CCATGTACGT GGGCGACTTA	840
TGGGGTGGGC TCTTCTCGT TGGGCAGTTG TTACACGTTCA GACCCAGGAT GATGAGATC	900
GCCCAGGACT GCAACTGTTC CATCTATGCA GCCCACATCA CTGGGCACCG GATGGCG	957

(2) INFORMATION FOR SEQ ID NO: 48:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 319 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 48:

Met Ser Thr Leu Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn		
1	5	10
Arg Arg Pro Met Asp Val Lys Phe Pro Gly Gly Gln Ile Val Gly		
20	25	30
Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala		
35	40	45
Thr Arg Lys Thr Ser Glu Arg Ser Gln Ala Arg Gly Arg Gln Pro		

50	55	60	
Ile Pro Lys Val Arg Gln Asn Gln Gly Arg Thr Trp Ala Gln Pro GLY			
65	70	75	80
Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys Gly Trp Ala Gly Trp			
85	90	95	
Leu Leu Ser Pro Arg Gly Ser Arg Pro Asp Trp Xaa Pro Asn Asp Pro			
100	105	110	
Arg Xaa Arg Ser Arg Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Cys			
115	120	125	
Gly Phe Ala Asp Leu Met Glu Tyr Ile Pro Val Val Gly Ala Pro Leu			
130	135	140	
Gly Gly Val Ala Ala Glu Leu Xaa His Gly Val Arg Ala Ile Glu Asp			
145	150	155	160
Gly Ile Asn Tyr Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile			
165	170	175	
Phe Xaa Leu Ala Leu Leu Ser Cys Leu Thr Thr Pro Ala Ser Ala Leu			
180	185	190	
Asn Tyr Ala Asn Lys Ser Gly Leu Tyr His Leu Thr Asn Asp Cys Pro			
195	200	205	
Asn Ser Ser Ile Val Tyr Glu Ala Asn Gly Met Ile Leu His Leu Pro			
210	215	220	
Gly Cys Val Pro Cys Val Lys Thr Gly Asn Leu Thr Lys Cys Trp Leu			
225	230	235	240
Ser Ala Ser Pro Thr Leu Ala Val Gln Asn Ala Ser Val Ser Ile Arg			
245	250	255	
Gly Val Arg Glu His Val Asp Leu Leu Val Gly Ala Ala Ala Phe Cys			
260	265	270	
Ser Ala Met Tyr Val Gly Asp Leu Cys Gly Gly Leu Phe Leu Val Gly			
275	280	285	
Gln Leu Phe Thr Phe Arg Pro Arg Met Tyr Glu Ile Ala Gln Asp Cys			
290	295	300	
Asn Cys Ser Ile Tyr Ala Gly His Ile Thr Gly His Arg Met Ala			
305	310	315	

(2) INFORMATION FOR SEQ ID NO: 49:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 309 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(v) SEQUENCE DESCRIPTION: SEQ ID NO: 49:

ATGAGCACAC TTCTAAACC ACAAAAGAAA ACCAAAAAGAA ACACCAACCC CGGCCACAGG	60
ACGTTAAGTT CCCAGGGGGC GGTCAAGATCG TTGGTGGAGT TTACGTGCTA CCACGCCAGG	120
GCCCCCAGTT GGGTGTGCGT GCAGTGGCA AGACTTCCGA CGGGTGGCAA CCTCGCAGTA	180
GGCGCCAACC CATCCCCAGG CGCGGCCGAA CCGAGGGCAG GTCTGGGCT CAGCCCCGGT	240
ACCCCTGGCC CCTATATGGG AATGAGGGCT GCGGGTGGGC AGGGTGGCTC CTGTCCCCGC	300
GCGGCTCTC	309

(2) INFORMATION FOR SEQ ID NO: 50:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 115 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 50:

Met Ser Thr Leu Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn
1 5 10 15

Xaa Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
20 25 30

Gly Val Tyr Val Leu Pro Arg Arg Gly Pro Gln Leu Gly Val Arg Ala
35 40 45

Val Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Ser Arg Arg Gln Pro
50 55 60

Ile Pro Arg Ala Arg Arg Thr Glu Gly Arg Ser Trp Ala Gln Pro Gly
65 70 75 80

Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys Gly Trp Ala Gly Itp
85 90 95

Leu Leu Ser Pro Arg Gly Ser Arg Pro Ser Trp Gly Pro Asn Asp Pro
100 105 110

Arg Arg Arg
115

(2) INFORMATION FOR SEQ ID NO: 51:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 447 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 51:

GACGGAATTA ATTTCCCAAC AGGAAATTAA CCTGGTTCGCT CTTTCTCTAT CTTCTCTCTG 60
GCTTTGTTCT CATGCTTGCCT TACACCCACA GCCGGGCTGG AGTACCGTAA TGCCCTCCGA 120
CTCTACATGG TAACTAACGA CTGCAGTAAC GGTAGTATCG TGTATGAGGC CGGGGATATT 180
ATCCTCCACT TACCTGGCTG TGCCCCCTGC GTACGCTCTG GCAATACATC AAGATGCTGG 240
ATCCCTGTGA GCCCYACCGT CGCCGTGAAG TCGCCCTGCG CGGCCACCGC CTCTCTCCGC 300
ACCGCACGTGG ATATGATGGT GGGRGCGGC ACCCTATGCT CAGCTCTCTA CGTAGGGAGAC 360
CTTTGTGGAG CGCTATTTCT TGTGTYGGCAG GGGTTCTCAT GGAGACATCG CCAGCATTGG 420
ACTGTCCAGG ACTGCAACTG TTCCATC 447

(2) INFORMATION FOR SEQ ID NO: 52:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 149 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 52:

Asp Gly Ile Asn Phe Ala Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser
1 5 10 15
Ile Phe Leu Leu Ala Leu Phe Ser Cys Leu Leu Thr Pro Thr Ala Gly
20 25 30
Leu Glu Tyr Arg Asn Ala Ser Gly Leu Tyr Met Val Thr Asn Asp Cys
35 40 45
Ser Asn Gly Ser Ile Val Tyr Glu Ala Gly Asp Ile Ile Leu His Leu
50 55 60
Pro Gly Cys Val Pro Cys Val Arg Ser Gly Asn Thr Ser Arg Cys Trp
65 70 75 80
Ile Pro Val Ser Xaa Thr Val Ala Val Lys Ser Pro Cys Ala Ala Thr
85 90 95
Ala Ser Leu Arg Thr His Val Asp Met Met Val Xaa Ala Ala Thr Leu
100 105 110
Cys Ser Ala Leu Tyr Val Gly Asp Leu Cys Gly Ala Leu Phe Leu Xaa
115 120 125
Gly Gln Gly Phe Ser Trp Arg His Arg Gln His Trp Thr Val Gln Asp
130 135 140
Cys Asn Cys Ser Ile
145

(2) INFORMATION FOR SEQ ID NO: 53:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 340 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 53:

CTCGACAGTT ACTGAGAATG ACATCCGTGT CGAGGAATCA ATATAACCAAT GTTGTGACTT 60
GGCCCCCGAG GCTCGCAAGG CCATAAAGTC GCTCACCGAG CGGCTGTACA TCGGGGGCCC 120
YCTAACCAAT TCAAAAGGAC AGAACTGCGG CTACCGTCGG TGCCGGGCCA GCGGCGTGCT 180
GACTACCAGC TGCGGCAACA CCCTGACATG CTACTTGAAA GCCAGAGCGG CCTGTGAGC 240
TGCAAAGCTC CGGGACTGCA CCATGCTCGT GTGCAGGGAT GACCTTGCG TTATCTGTGA 300
GAGTGCGGGA GTCGAGGAAG ACGCGGCGAA CCTACGAGCT 340

(2) INFORMATION FOR SEQ ID NO: 54:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 113 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 54:

Ser Thr Val Thr Glu Asn Asp Ile Arg Val Glu Glu Ser Ile Tyr Gln
1 5 10 15
Cys Cys Asp Leu Ala Pro Glu Ala Arg Lys Ala Ile Lys Ser Leu Thr
20 25 30

Glu Arg Leu Tyr Ile Gly Gly Xaa Leu Thr Asn Ser Lys Gly Gln Asn
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Cys
50 55 60

Gly Asn Thr Leu Thr Cys Tyr Leu Lys Ala Arg Ala Ala Cys Arg Ala
65 70 75 80

Ala Lys Leu Arg Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Cys Glu Ser Ala Gly Val Glu Asp Ala Ala Asn Leu Arg
100 105 110

Ala

(2) INFORMATION FOR SEQ ID NO: 55:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 340 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 55:

CTCGACAGTT ACTGAGAACG ACATCCGTAC CGAGGRATCA ATCTATCAAT GTTGTGACTT 60
GGCCCCYAG GCCCCAAGG CCATAAACGTC GCTCACCGAG CGGCTGTACG TCGGGGGCCC 120
CCTAACCAAT TCAAAGGGGC AGAACTGCGG CTATCGTCGG TGTCGCCCTA GCGGCGTGCT 180
GACCACCAAGC TGCGGCAACA CCCTCACATG CTACTTGAAA GCCAGGGCGG CCTGTCGAGC 240
TGCAAAGCTC CAGGACTGCA CGATGCTCGT GTGCGGAGAC GACCTTGTCG TTATCTGTGA 300
GAGCGGGGA GTCGAGGAGG ACGGGGCGAA CCTACGAGTC 340

(2) INFORMATION FOR SEQ ID NO: 56:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 113 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 56:

Ser Thr Val Thr Glu Asn Asp Ile Arg Thr Glu Xaa Ser Ile Tyr Gln
1 5 10 15

Cys Cys Asp Leu Ala Xaa Glu Ala Arg Lys Ala Ile Lys Ser Leu Thr
20 25 30

Glu Arg Leu Tyr Val Gly Gly Pro Leu Thr Asn Ser Lys Gly Gln Asn
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Cys
50 55 60

Gly Asn Thr Leu Thr Cys Tyr Leu Lys Ala Arg Ala Ala Cys Arg Ala
65 70 75 80

Ala Lys Leu Gln Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Cys Glu Ser Ala Gly Val Glu Asp Ala Ala Asn Leu Arg
100 105 110

Val

(2) INFORMATION FOR SEQ ID NO: 57:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 340 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 57:

CTCGACAGTT ACTGAGAACG ACATTCGTGT CGAGGAATCA ATCTTACCACT GCTGTGACTT	60
GGCCCCCGAG GCCCGCAAGG CCATAAAAGTC GCTCACCGAG CGGCTGTATA TCGGGGGTCC	120
CCTAAACCAAC TCAAAAGGGC AGAACTGCGG CTACCGTCGG TGCCCGGCCA GCGGCCTGCT	180
GACTTACCGC TCGGGTAATA CCCTCACATG TTACTTGAAA GCCAGGGCGG CCTGTGAGC	240
TGCGAAGCTC CAGGACTGCA CAATGCTCGT GTGCGGAGAC GACCTTGTCG TTATCTGTGA	300
GAGTCCRGGA GTCGAGGAGG ATGCGGGCAA CCTACGAGTC	340

(2) INFORMATION FOR SEQ ID NO: 58:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 113 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 58:

Ser Thr Val Thr Glu Asn Asp Ile Arg Val Glu Glu Ser Ile Tyr Gln			
1	5	10	15
Cys Cys Asp Leu Ala Pro Glu Ala Arg Lys Ala Ile Lys Ser Leu Thr			
20	25	30	
Glu Arg Leu Tyr Ile Gly Gly Pro Leu Thr Asn Ser Lys Gly Gln Asn			
35	40	45	
Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Cys			
50	55	60	
Gly Asn Thr Leu Thr Cys Tyr Leu Lys Ala Arg Ala Ala Cys Arg Ala			
65	70	75	80
Ala Lys Leu Gln Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val			
85	90	95	
Val Ile Cys Glu Ser Xaa Gly Val Glu Glu Asp Ala Ala Asn Leu Arg			
100	105	110	

Val

(2) INFORMATION FOR SEQ ID NO: 59:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 652 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 59:

CGTACAGCCT CCAGGACCCC CCCTCCCCGG AGAGCCATAG TGGTCTGCGG AACCGGTGAG 60
TACACCGGAA TTGCCAGGAC GACCGGGTCC TTTCTTGAT CAACCCGCTC AATGCCCTGGA 120
GATTTGGCGC TGCCCCCGCA AGACTGCTAG CCGAGTAGTG TTGGGTGCGG AAAGGCCTTG 180
TGGTACTGCC TGATAGGGTG CTTGGAGTG CCCCCGGAGG TCTCGTAGAC CGTGCACCAT 240
GAGCACGAAT CCTAAACCTC AARGAAAAAC CAAAAGAAC ACCAACCGCC GCCCACAGGA 300
CGTCAAGTTC CCGGGGGGTG GCCAGATCGT TGGTGGAGTC TAGTGTCTAC CGCGCAGGG 360
CCCTAGATTTG GGTGTGGCGC CAGCGCGGAA GACTTCGGAG CGGTGCCAAC CTCGTGGAG 420
GCCCCAACCT ATTCCCAAGG ACCGGCGACC CGAGGGCAGG TCCTGGGGC AGCCCCGGTA 480
CCCCCTGGCCC CTCTATGGTA ACGAGGGCTG CGGGTGGGCA GGTNGGCTCC TGTCCCCTCG 540
CGGCTCCCCGT CCTAGTTGGG GTCTACTGA CCCCCGGCGT AGTCACCGCA ATTGGGTAA 600
GGTCATCGAT ACCCTCACGT GTTGNTTCGC CGACCTCATG GGGTACATAC CG 652

(2) INFORMATION FOR SEQ ID NO: 60:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 138 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 60:

Met Ser Thr Asn Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn
1 5 10 15
Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gln Ile Val Gly
20 25 30
Gly Val Tyr Val Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
35 40 45
Ala Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
50 55 60
Ile Pro Lys Glu Arg Arg Pro Glu Gly Arg Ser Trp Ala Gln Pro Gly
65 70 75 80
Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Cys Gly Trp Ala Gly Xaa
85 90 95
Leu Leu Ser Pro Arg Gly Ser Arg Pro Ser Trp Gly Pro Thr Asp Pro
100 105 110
Arg Arg Arg Ser Arg Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Cys
115 120 125
Xaa Phe Ala Asp Leu Met Gly Tyr Ile Pro
130 135

(2) INFORMATION FOR SEQ ID NO: 61:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 340 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 61:

CTCAACGGTC ACTGAAGCTG ATATCCGAC ACAGGAGTCC ATATACCAAT GCTGTGACCT	60
GCACCCCGAA GCACGTGTAG CCATCAAGTC TTTGACTGAA AGGCTGTACG TCGGGGGGCC	120
CTTGACCAAT TCAAAAGGGG AGAACTGCGG CTATCCAGA TGCCGTGCCA GCGGCGCTT	180
GACAAACCCAGC TGCGGCAACA CCCTCACCTG CTATATCAAG GCCCTAGCAG CCTGTAGAGC	240
TGCCAAGCTC CAGGACTGCA CCATGTCGT CTGTGGCGAC GACCTGGTCG TGATCTGCGA	300
GAGTGTAGGG ACCCAGGAGG ATGCGCGAG CCTGCGAGCC	340

(2) INFORMATION FOR SEQ ID NO: 62:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 113 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 62:

Ser Thr Val Thr Glu Ala Asp Ile Arg Thr Glu Glu Ser Ile Tyr Gln	
1 5 10 15	
Cys Cys Asp Leu His Pro Glu Ala Arg Val Ala Ile Lys Ser Leu Thr	
20 25 30	
Glu Arg Leu Tyr Val Gly Gly Pro Leu Thr Asn Ser Lys Gly Glu Asn	
35 40 45	
Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Cys	
50 55 60	
Gly Asn Thr Leu Thr Cys Tyr Ile Lys Ala Leu Ala Ala Cys Arg Ala	
65 70 75 80	
Ala Lys Leu Gln Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val	
85 90 95	
Val Ile Cys Glu Ser Val Gly Thr Gln Glu Asp Ala Ala Ser Leu Arg	
100 105 110	
Ala	

(2) INFORMATION FOR SEQ ID NO: 63:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 340 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 63:

NTCAACAGTC ACTGAGAGTG ATATCCGTAC AGAGGAGTCC ATCTACCAAT GCTGTGATCT	60
AGACCCCGAG GCTCGCAAGG CCATAAGTC CCTCACAGAG AGGCTTTATA TCGGGGGTCC	120
CCTGACAAAC TCAAAAGGGC AGAACTGCGG CTACCGCCGA TGCCGTCAA GCGGCGTCCT	180
GACGACTAGC TGCGGCAACA CCCTCACCTG TTACATAAG GCCAGGGCAG CCTGTCGAGC	240
TGCCAAGCTC CAGGATTGCT CAATGTCGT CTGTGGCGAC GACCTGGTCG TTATCTGCGA	300
GATCGAGGGG NTCCANGAGG ATCCGTCGAN NNNNNNNNNN	340

(2) INFORMATION FOR SEQ ID NO: 64:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 113 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 64:

Ser Thr Val Thr Glu Ser Asp Ile Arg Thr Glu Glu Ser Ile Tyr Gln
1 5 10 15
Cys Cys Asp Leu Asp Pro Glu Ala Arg Lys Ala Ile Arg Ser Leu Thr
20 25 30
Glu Arg Leu Tyr Ile Gly Gly Pro Leu Thr Asn Ser Lys Gly Gln Asn
35 40 45
Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Cys
50 55 60
Gly Asn Thr Leu Thr Cys Tyr Ile Lys Ala Arg Ala Ala Cys Arg Ala
65 70 75 80
Ala Lys Leu Gln Asp Cys Ser Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95
Val Ile Cys Glu Ile Glu Gly Xaa Xaa Glu Asp Pro Ser Xaa Xaa Xaa
100 105 110
Xaa

(2) INFORMATION FOR SEQ ID NO: 65:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 831 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 65:

CGTAGACCGT GCACCATGAG CACGAATCCT AAACCTCAAA GAAAAACCAA ACGTAACATC 60
AACCAGCGCC CACAGGACGT CAAGTCCCCG GGCGGTGGCC AGATCGTCGG TGGAGTTTAC 120
CTGTTGCCCG GCAGGGGCCCG TAGATTGGGT GTGGCGCCGA CTAGGAAGAC TTCCGAGCGG 180
TCGCAACCTC TGAGGGAGGCG ACAGCCTATC CCCAAGGCTC GCCGATCCGA GGGCAGGTCC 240
TGGGCTCAGC CGGGGTACCC TTGGCCCCCTC TATGGCAATG AGGGCATGGG TTGGGCAGGG 300
TGGCTCTGT CCCCCCATGG CTCAGGGCCT AGTTGGGCCCTTCAAGACCC CCGGCCTAGG 360
TCGGTAAATT TGGGTAAGGT CATCGATACC CTCACATCGG GCTTCGCCGA CCTCATGGG 420
TACATTCCGC TCGTCGGCGC CCCCCCTAGGG GGCGTTGCCA GGGCCCTGGC GCAAGGCTTC 480
CGGGATCTAC CACGTCAACCA ACCATTGTTCA CAATGGGAGC ATTGGTGTATG AGGGCGAAGG 540
CATGATCATG CATCTCCCCG GGTGCGTGCC CTGGCGTCGG GAAGGTAATA TCTCTCGTTG 600
CTGGGTACCG TTTCGCCCCA CGCTCGCACC CAGGAATGCT ACCGTTCCCCA CTCAGGCAAT 660
TGGGGACAC GTGCACTTGC TTGTTGGGCC GGCCACACTC TGTTCTGCTA TGTATGTTGG 720
GGACCTCTGT GGGTCCGTCT TCCTCGTCGG CCAACTGTTCA ACCTTCACAW CCCGCCAGNA 780
CTACACAGTG CAAGACTGCA ATTGTTCCAT CTACCCGGC CATATAACGG G 831

(2) INFORMATION FOR SEQ ID NO: 66:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 158 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 66:

Met Ser Thr Asn Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Ile Asn
1 5 10 15

Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gln Ile Val Gly
20 25 30

Gly Val Tyr Leu Leu Pro Arg Arg Gly Pro Arg Leu Gly Val Arg Ala
35 40 45

Thr Arg Lys Thr Ser Glu Arg Ser Gln Pro Arg Gly Arg Arg Gln Pro
50 55 60

Ile Pro Lys Ala Arg Arg Ser Glu Gly Arg Ser Trp Ala Gln Pro Gly
65 70 75 80

Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Met Gly Trp Ala Gly Trp
85 90 95

Leu Leu Ser Pro His Gly Ser Arg Pro Ser Trp Gly Pro Ser Asp Pro
100 105 110

Arg Arg Arg Ser Arg Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Cys
115 120 125

Gly Phe Ala Asp Leu Met Gly Tyr Ile Pro Leu Val Gly Ala Pro Leu
130 135 140

Gly Gly Val Ala Arg Ala Leu Ala Gln Gly Phe Arg Asp Leu
145 150 155

(2) INFORMATION FOR SEQ ID NO: 67:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 340 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 67:

NNNNNNNGTC ACTGAGAGTG ATATCCGTGT CGAGGARTCA ATTTACCAAT GCTGTGACCT 60
GGCCCCCGAG GCTCGCGTAG CCATAAAGTC GCTCACTGAG CGGCTATATG TCGGGGGCCC 120
TCTCACCAAC TCAAAAGGAC AGAAACTGCCG CTATGCCGG TCCCGTGGCA GCGGTGTGCT 180
GACTACTAGC TGCGGTAACA CCCTCACATG CTACCTGAAA GCGGCCGGG CCTGTGAGC 240
TCCAAACGTC CGGAAATGCA CAATGCTCGT GTGTGGCCAC GACCTCGTGG TTATCTGTCA 300
GAGTGCAGGGG GTCCAGGAGG ATGCTGCAAG CCTNNNNNNNN 340

(2) INFORMATION FOR SEQ ID NO: 68:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 113 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 68:

Xaa Xaa Val Thr Glu Ser Asp Ile Arg Val Glu Xaa Ser Ile Tyr Gln
1 5 10 15

Cys Cys Asp Leu Ala Pro Glu Ala Arg Val Ala Ile Lys Ser Leu Thr
20 25 30

Glu Arg Leu Tyr Val Gly Gly Pro Leu Thr Asn Ser Lys Gly Gln Asn
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Cys
50 55 60

Gly Asn Thr Leu Thr Cys Tyr Leu Lys Ala Ala Ala Ala Cys Arg Ala
65 70 75 80

Ala Lys Leu Arg Glu Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Cys Glu Ser Ala Gly Val Gln Glu Asp Ala Ala Ser Xaa Xaa
100 105 110

Xaa

(2) INFORMATION FOR SEQ ID NO: 69:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 340 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 69:

CTCGACAGTC ACAGAGAGAG ATATAAGNAC TGAGGAGTCC ATATACCAAGG CTTGTTCCCTT 60
ACCCGAGCAG GCCAGAACTG CCATACACTC ATTGACTGAG AGACTCTACG TAGGAGGGCC 120
CATGATGAAAC AGCAAAGGGC AATCCTGCGG ATACACGGCAT TGGCCGCGCA CGGGAGTGCT 180
CACCACCACT ATGGGAAATA CCATCACCGTG CTACATCAAG GCCCTAGCGG CTTGTAAGC 240
AGCAGGAATA GTGGCCCCCA CCATGCTGGT GTGCGGGCAT GACCTAGTTG TCATCTCAGA 300
GAGTCAGGGA GTCGAGGAGG ACGACCGGAA CCTGANNNNN 340

(2) INFORMATION FOR SEQ ID NO: 70:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 113 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 70:

Ser Thr Val Thr Glu Arg Asp Ile Xaa Thr Glu Glu Ser Ile Tyr Gln
1 5 10 15

Ala Cys Ser Leu Pro Glu Gin Ala Arg Thr Ala Ile His Ser Leu Thr
20 25 30

Glu Arg Leu Tyr Val Gly Gly Pro Met Met Asn Ser Lys Gly Gln Ser
35 40 45

Cys Gly Tyr Arg His Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Met

50	55	60	
Gly Asn Thr Ile Thr Cys Tyr Ile Lys Ala			
65	70	75	80
Ala Gly Ile Val Ala Pro Thr Met Leu Val			
85		90	95
Val Ile Ser Glu Ser Gln Gly Val Glu Glu Asp Asp Arg Asn Leu Xaa			
100	105	110	
Xaa			

(2) INFORMATION FOR SEQ ID NO: 71:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 340 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 71:

CTCAACCGTC ACAGAGAGGG ATATAAGAAC TGAGGAGTCC ATATAACCTGG CCTGCTCCTT	60
ACCCGAGCAG GCCCCGAGCTG CCATACATTC ATTAACGTAG AGACTTTACG TGGGAGGGCC	120
CATGATGAAC AGCAAAAGGGC AGTCCTCGGG ATACAGGGGT TGGCCGCCCTA GCGGAGTGCT	180
CACCAACAGT ATGGGGAACA CCATCACGTG TTATGTAAA GCCCTCCAG CTTGTAAAGC	240
TGCGGGCATT GTTCCCCCA CGATGCTGGT GTGCAGGGAT GACCTGGTTG TCATCTCAGA	300
GAGTCAGGGG GCTGAGGAGG ACGAGCGAAA CCTGAGAGTC	340

(2) INFORMATION FOR SEQ ID NO: 72:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 113 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 72:

Ser Thr Val Thr Glu Arg Asp Ile Arg Thr Glu Glu Ser Ile Tyr Leu			
1	5	10	15
Ala Cys Ser Leu Pro Glu Gln Ala Arg Thr Ala Ile His Ser Leu Thr			
20	25	30	
Glu Arg Leu Tyr Val Gly Gly Pro Met Met Asn Ser Lys Gly Gln Ser			
35	40	45	
Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Met			
50	55	60	
Gly Asn Thr Ile Thr Cys Tyr Val Lys Ala Leu Ala Ala Cys Lys Ala			
65	70	75	80
Ala Gly Ile Val Ala Pro Thr Met Leu Val Cys Gly Asp Asp Leu Val			
85	90	95	
Val Ile Ser Glu Ser Gln Gly Ala Glu Glu Asp Glu Arg Asn Leu Arg			
100	105	110	
Val			

(2) INFORMATION FOR SEQ ID NO: 73:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 340 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 73:

CTCAACAGTC GCGGAGAGAG ACATCAGGAC CGAGGAGTCC ATTACCTTG CCTGCTCCTT	60
ACCCGAGCAA GCCCGAACTG CCATACATTC ATTGACTGAG AGACTTTACG TAGGAGGGCC	120
CATGATGAAAC AGCAAGGGAC AGTCCTGCGG TTACAGACGT TGCCGC3CCA GCGGAGTGCT	180
CACCAACCAGC ATGGGAAATA CCATCACATG CTATGTGAAG GCATTAGCTG CCTGCAAAGC	240
TGCAGGCATC TTGAGCTCCCA CGATGCTGGT TTGTGGCGAC GATCTGGTCA TCATCTCAGA	300
GAGTCAGGGA ACCGAGGAGG ATGAGCGGAA CCTGAGAGTC	340

(2) INFORMATION FOR SEQ ID NO: 74:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 113 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 74:

Ser Thr Val Ala Glu Arg Asp Ile Arg Thr Glu Glu Ser Ile Tyr Leu
1 5 . 10 15

Ala Cys Ser Leu Pro Glu Gln Ala Arg Thr Ala Ile His Ser Leu Thr
20 25 30

Glu Arg Leu Tyr Val Gly Gly Pro Met Met Asn Ser Lys Gly Gln Ser
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Met
50 55 60

Gly Asn Thr Ile Thr Cys Tyr Val Lys Ala Leu Ala Cys Lys Ala
65 70 75 80

Ala Gly Ile Val Ala Pro Thr Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Ile Ile Ser Glu Ser Gln Gly Thr Glu Glu Asp Glu Arg Asn Leu Arg
100 105 110

Val

(2) INFORMATION FOR SEQ ID NO: 75:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 1195 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 75:

CGNACANCT CCAGGGCCCC CCCTCCGGG AGAGCCATAG TGGTCTCGGG AACCGGTGAG 60
TACACCGGAA TTGCGGGGAA GACTGGGTCC TTTCTTGGAT AAACCCACTC TATGCCCGGC 120
CATTTGGGCG TCCCCCGCA AGACTGCTAR CCGAGTAGCG TTGGGTTGGG AAAGGCCTTG 180
TGGTACTGCC TGATAGGGTC CTTGCGAGTG CCCGGGAGG TCTCGTAGAC CGTGCATCAT 240
GAGCACAAT CCTAAACCTC AAAGAAAAAC CAAAAGAAC ACTAACCGCC GCCCACRGG 300
CGTTAAGTTC CGGGCGGTG GCCAGATCGT TGGCGGAGTA TACTTGTGTC CNTGCAGGG 360
NCCCAGGTNG NGINTATGCC CAACGANGAA GACTNCCGAA CAGTCCCAGC CACGTGGGAG 420
GCGCCAGCCC ATCCCGAAC ATCGGNGCAC CACTGGCAAG TCCCTGGGAC GTCCAGGATA 480
TCCCTGGCCC CTGTATGGGA ACCGAGGGCCT CGGGTGGGCA GGGTGGCTCC TGTCCCCCG 540
GGGCTCCCGC CGGTATGGG GCCCCACGGA CCCCCGGCAT AGGTGCGGCA ACTTGGTAA 600
GGTCATCGAT ACCCTCACGT NCGGCTTINC CGACCTCATG GGGTACATTC CGGTGCTG 660
CGCCCCAGTA GGNGGCCTG CCAGAGCTCT CGCGCATGGC GTGAGAGTCC TGGAGGACGG 720
GATRAACTAT GAAACAGGGA ACCTCCCGG TTGTCCTTC TCTATCTCCC TCCCTGCTCT 780
TCTGTCCTGA ATTACCGNGC CAGTTCTGC TGTGGAAATC AAAAACACCA GMAACACATA 840
CATGGTACT AACGACTGTT CAAACAGYAG CATCACCTGG CAGCTTNNNG NCGCGGTGCT 900
TCACGTTCCCT GGATGCGTCC CCTGTGAAGG AGAGGGCAAC AGTTCCCGGT GCTGGATTCC 960
AGTCACGCC RACGTAKNCG TGAGCCGACCC TGGTGCCTA ACCGAGGGGT TGGCATCGCA 1020
CATCGACACC ATCGTAGCGT CCGCAACATT TTGTTCTGCG CTCTACATAG GGGATGTATG 1080
TGGCGCATA ATGATAGCTG CCCAAGTGGT CATCGTCTCG CGGGAGCCTC ATCACTTGT 1140
CCAGGACTGT AACTGTTCCA TCTACCGGG CCACATAACG GGGCCTCGTA TGTNG 1195

(2) INFORMATION FOR SEQ ID NO: 76:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 318 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 76:

Met Ser Thr Asn Pro Lys Pro Gln Arg Lys Thr Lys Arg Asn Thr Asn
 1 5 10 15

Arg Arg Pro Gln Asp Val Lys Phe Pro Gly Gly Gly Gln Ile Val Gly
20 25 30

Gly Val Tyr Leu Leu Xaa Cys Arg Xaa Pro Arg Xaa Xaa Xaa Cys Ala
35 40 45

Thr Xaa Lys Thr Xaa Glu Gln Ser Gln Pro Arg Gly Arg Arg Gln Pro
50 55 60

Ile	Pro	Lys	Asp	Arg	Xaa	Thr	Thr	Gly	Lys	Ser	Trp	Gly	Arg	Pro	Gly
65					70				75				80		

Tyr Pro Trp Pro Leu Tyr Gly Asn Glu Gly Leu Gly Trp Ala Gly Trp
85 90 95

Leu Leu Ser Pro Arg Gly Ser Arg Pro Ser Trp Gly Prc Thr Asp Prc
100 105 110

Arg His Arg Ser Arg Asn Leu Gly Lys Val Ile Asp Thr Leu Thr Xa
115 120 125

Gly Phe Xaa Asp Leu Met Gly Tyr Ile Pro Val Val Gly Ala Pro Val
130 135 140

Xaa Gly Val Ala Arg Ala Leu Ala His Gly Val Arg Val Leu Glu Asp
 145 150 155 160
 Gly Ile Asn Tyr Glu Thr Gly Asn Leu Pro Gly Cys Ser Phe Ser Ile
 165 170 175
 Ser Leu Leu Ala Leu Leu Ser Ile Thr Xaa Pro Val Ser Ala Val Glu
 180 185 190
 Ile Lys Asn Thr Xaa Asn Thr Tyr Met Val Thr Asn Asp Cys Ser Asn
 195 200 205
 Xaa Ser Ile Thr Trp Gln Leu Xaa Xaa Ala Val Leu His Val Pro Gly
 210 215 220
 Cys Val Pro Cys Glu Arg Glu Gly Asn Ser Arg Cys Trp Ile Pro
 225 230 235 240
 Val Thr Pro Xaa Val Xaa Val Ser Arg Pro Gly Ala Leu Thr Glu Gly
 245 250 255
 Leu Arg Ser His Ile Asp Thr Ile Val Ala Ser Ala Thr Phe Cys Ser
 260 265 270
 Ala Leu Tyr Ile Gly Asp Val Cys Gly Ala Ile Met Ile Ala Ala Gln
 275 280 285
 Val Val Ile Val Ser Pro Glu His His His His Phe Val Gln Asp Cys Asn
 290 295 300
 Cys Ser Ile Tyr Pro Gly His Ile Thr Gly Pro Arg Met Xaa
 305 310 315

(2) INFORMATION FOR SEQ ID NO: 77:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 340 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 77:

ATCCACAGTC ACTGAAAGAG ACATCAGAGT TGAAGAGTCC GTTTATCTGT CCTGTTCACT 60
 TCCCGAGGAG GCCCGACCTG CCATACACTC ACTAACTGAG AGGCTGTACG TGGGAGGTCC 120
 CATGCAGAAC AGCAAGGGC AATCCTGCGG ATACAGGCCG TGCCGCCCA GCGGGGTGCT 180
 CACCACTAGC ATGGGAAATA CTCTCACATG CTACTTGAG GCCCAGGCCG CCTGCAGGGC 240
 CGCGGGCATT GTTGCACCCA CAATGCTGGT GTGTGGGAC GACCTGGTCG TCATCTCAGA 300
 GAGTCAGGG ACTGAGAGGG ACGAGAACAA CCTGAGACCT 340

(2) INFORMATION FOR SEQ ID NO: 78:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 113 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 78:

Ser Thr Val Thr Glu Arg Asp Ile Arg Val Glu Glu Ser Val Tyr Leu
 1 5 10 15
 Ser Cys Ser Leu Pro Glu Glu Ala Arg Ala Ala Ile His Ser Leu Thr
 20 25 30

Glu Arg Leu Tyr Val Gly Gly Pro Met Gln Asn Ser Lys Gly Gln Ser
35 40 45
Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Met
50 55 60
Gly Asn Thr Leu Thr Cys Tyr Leu Lys Ala Gln Ala Ala Cys Arg Ala
65 70 75 80
Ala Gly Ile Val Ala Pro Thr Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95
Val Ile Ser Glu Ser Gln Gly Thr Glu Arg Asp Glu Asn Asn Leu Arg
100 105 110

Pro

(2) INFORMATION FOR SEQ ID NO: 79:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 340 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 79:

CTAACAGTC ACGGAGAGGG ACATCAGGAA TGAGGAGTCC ATATTCTGG CCTGCTCGTT 60
GCCCGAGGAG GCCCGGACTG TCATACATTC GCTCACTGAG AGACTCTACA TAGGCCGCC 120
GATGATGAAAC ACCAAAGGCC AGTCCTGTGG ATACAGGCGT TGTCGCGCCA GCGGGGTGTT 180
CACCCTAGC ATGGGCAATA CCATCACCTG CTATGTGAAA GCCATGGCAG CTTGCAGAGC 240
TGCCGGGATT GACGCCCCA CAATGTGTTGGT ATGTGGCGAC GACCTGGTGG TCATCTCAGA 300
GAGTCAGGGG ACCGAGGAGG ACCAGCAGAA TCTGAGAGTC 340

(2) INFORMATION FOR SEQ ID NO: 80:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 113 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 80:

Ser Thr Val Thr Glu Arg Asp Ile Arg Asn Glu Glu Ser Ile Phe Leu
1 5 10 15

Ala Cys Ser Leu Pro Glu Glu Ala Arg Thr Val Ile His Ser Leu Thr
20 25 30

Glu Arg Leu Tyr Ile Gly Gly Pro Met Met Asn Ser Lys Gly Gln Ser
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Phe Thr Thr Ser Met
50 55 60

Gly Asn Thr Ile Thr Cys Tyr Val Lys Ala Met Ala Ala Cys Arg Ala
65 70 75 80

Ala Gly Ile Asp Ala Pro Thr Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Ser Glu Ser Gln Gly Thr Glu Glu Asp Glu Arg Asn Leu Arg
100 105 110

Val

(2) INFORMATION FOR SEQ ID NO: 81:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 340 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 81:

CTCTTGACTC TACTGTCACT	GAACAGGATA TCAGGGTAGA	AGAAGAAAATA TACCAATGTT	60	
GTGACCTTGAG	GCCGGAGGCT AGACGGGC	CAAATCGCT CACGGAACCG	CTTTACGTTG	120
GAGGTCCCAG	GTTCACACAGC AAGGGGCTCA	AATGCGGATA TCGCCGTTGC	CGTGTAGCG	180
GTGTATTGCC	CACTAGCTAC GGTAATACAA	TCACCTGCTA CATCAAGGCC	AGAGCCGCTG	240
CTCGAGCTGC	GGGCCTTCAA GACCCATCAT	TCCTTGTCTG CGGAGATGAT	TTGGTGGTAG	300
TGGCTGAGAG	TTGCGKCGTT GATGAGGAGG	ATAGGGCAGC		340

(2) INFORMATION FOR SEQ ID NO: 82:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 113 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 82:

Ser	Thr	Val	Thr	Glu	Gln	Asp	Ile	Arg	Val	Glu	Glu	Glu	Ile	Tyr	Gln
1				5					10				15		
Cys	Cys	Asp	Leu	Glu	Pro	Glu	Ala	Arg	Arg	Ala	Ile	Lys	Ser	Leu	Thr
			20				25					30			
Glu	Arg	Leu	Tyr	Val	Gly	Gly	Pro	Met	Phe	Asn	Ser	Lys	Gly	Leu	Lys
	35				40				45						
Cys	Gly	Tyr	Arg	Arg	Cys	Arg	Ala	Ser	Gly	Val	Leu	Pro	Thr	Ser	Tyr
	50				55				60						
Gly	Asn	Thr	Ile	Thr	Cys	Tyr	Ile	Lys	Ala	Arg	Ala	Ala	Ala	Arg	Ala
65				70				75					80		
Ala	Gly	Leu	Gln	Asp	Pro	Ser	Phe	Leu	Val	Cys	Gly	Asp	Asp	Leu	Val
				85				90					95		
Val	Val	Ala	Glu	Ser	Cys	Xaa	Val	Asp	Glu	Glu	Asp	Arg	Ala	Ala	Leu
					100			105					110		

Arg

(2) INFORMATION FOR SEQ ID NO: 83:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 340 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 83:

CTCCACTGTA ACCGAAAAGG ACATCAGGCC CGAGGAAGAG GTCTATCAGT GTTGTGACCT	60
GGAGCCCCAA GCTCGCAAGG TTATTACCGC CCTCACAGAA AGACTCTACG TGGGCGGCC	120
CATGCACAAC AGCAAGGGAG ACCTTTGTGG GTATCGGAGA TGCCGCGCAA GCGGCCTA	180
CACGACCAAGC TTGGAAACA CACTGACGTG CTACCTCAAA GCCTCAGCTG CTATTAGAGC	240
GGCAGGGCTG AGAGACTGCA CCATGCTGGT TTGCGGTGAC GACTTGGTCG TCATCGCTGA	300
GAGCGATGGC GTAGAGGAGG ATRACCGAGC CCTCCNAGCC	340

(2) INFORMATION FOR SEQ ID NO: 84:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 113 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 84:

Ser Thr Val Thr Glu Lys Asp Ile Arg Pro Glu Glu Glu Val Tyr Gln			
1	5	10	15
Cys Cys Asp Leu Glu Pro Glu Ala Arg Lys Val Ile Thr Ala Leu Thr			
20	25	30	
Glu Arg Leu Tyr Val Gly Gly Pro Met His Asn Ser Lys Gly Asp Leu			
35	40	45	
Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Tyr Thr Thr Ser Phe			
50	55	60	
Gly Asn Thr Leu Thr Cys Tyr Leu Lys Ala Ser Ala Ala Ile Arg Ala			
65	70	75	80
Ala Gly Leu Arg Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val			
85	90	95	
Val Ile Ala Glu Ser Asp Gly Val Glu Asp Asn Arg Ala Leu Xaa			
100	105	110	

Ala

(2) INFORMATION FOR SEQ ID NO: 85:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 340 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 85:

CTCCACGGTG ACTGAAAAGG ACATCAGGGT CGAGGAAGAG ATCTATCAAT GTTGTGACCT	60
GGARCCCGAA GCCCGCAAAG CAATATCCGC CCTCACAGAG AGRCTCTACT TGGGCGGCC	120
CATGTATAAC AGCAAAGGGG AGCTCTGCGG GTATCGGAGG TGCCGCGCGA GCGGAGTGA	180
CACCAACAAT TTGGAAACA CAGTGACCTG CTATCTTAAG GCCACCGCAG CTACCCAGGC	240
TGCAGGCCAA AAAGACTGCA CCATGCTGGT CTGCGGTGAC GACTTGGTCG TCATCGCCGA	300

(2) INFORMATION FOR SEQ ID NO: 86:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 113 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 86:

Ser Thr Val Thr Glu Lys Asp Ile Arg Val Glu Glu Glu Ile Tyr Gln
 1 5 10 15

Cys Cys Asp Leu Xaa Pro Glu Ala Arg Lys Ala Ile Ser Ala Leu Thr
 20 25 30

Glu Xaa Leu Tyr Leu Gly Gly Pro Met Tyr Asn Ser Lys Gly Glu Leu
 35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Tyr Thr Thr Ser Phe
 50 55 60

Gly Asn Thr Val Thr Cys Tyr Leu Lys Ala Thr Ala Ala Thr Arg Ala
 65 70 75 80

Ala Gly Leu Lys Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val
 85 90 95

Val Ile Ala Glu Ser Glu Gly Val Glu Glu Asp Ser Gln Pro Leu Arg
 100 105 110

Ala

(2) INFORMATION FOR SEQ ID NO: 87:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 340 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 87:

CTCCACCGTA ACCGAAAGGG ACATCAGGGT CGAGGAGGAG GTCTATCAGT GTTGTGATCT 50
 GGAGCCAGAG GCCCCAAGG CAATATCCGC CCTCACGGAG AGACTCTATG TGGCGGTCC 120
 CATGTTAAC AGCAAGGGAG ACCTATGTTG CTACCGCAGG TGGCGCAA GCGGCGTCTA 180
 CACCACCAAGC TTGGAAACA CACTGACCTG CTACCTCAAG GCCACGGCCG CTACCAGAGC 240
 GGCGGCCCTG AAGGATTGCA CAATGCTGGT TTGCGGGGAC GACCTGGTGG TCATCGCAGA 300
 GAGCGATGCC GTGGACGAGG ACCGCCCCAGC CCTCCAAGCT 340

(2) INFORMATION FOR SEQ ID NO: 88:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 113 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 88:

Ser Thr Val Thr Glu Arg Asp Ile Arg Val Glu Glu Val Tyr Gln

1 5 10 15
 Cys Cys Asp Leu Glu Pro Glu Ala Arg Lys Ala Ile Ser Ala Leu Thr
 20 25 30
 Glu Arg Leu Tyr Val Gly Gly Pro Met Phe Asn Ser Lys Gly Asp Leu
 35 40 45
 Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Tyr Thr Thr Ser Phe
 50 55 60
 Gly Asn Thr Leu Thr Cys Tyr Leu Lys Ala Thr Ala Ala Thr Arg Ala
 65 70 75 80
 Ala Gly Leu Lys Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val
 85 90 95
 Val Ile Ala Glu Ser Asp Gly Val Asp Glu Asp Arg Arg Ala Leu Gln
 100 105 110
 Ala

(2) INFORMATION FOR SEQ ID NO: 89:

(1) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 340 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 89:

CTCAACAGTC ACAGAGCGCG ATGTCCAGAC GGAGCATGAC ATCTACCACT GCTGTAAGTT 60
 GGAGCCCGCA GCACGGACAG CCATCACATC GCTTACTGAC CGATTGTACT NCGGTGGTCC 120
 CATGTNTAAC TCTAAAGGTC AGGCATGTGG ATACCGTAGG TGCAGGGCCA GTGGCGTCTT 180
 GACCACCATC CTGGCCAATA CTCTGACTTG CTACTTGAAA GCTCAGGGGG CATGCAAGAGC 240
 TGCCGGGCTG AAGGACTTTG ACATGTGGT CTGCGGAGAC GACCTTGTCG TTATTCGGA 300
 GAGTTTGGGG CTCTCGGAGG ACACTAGTGC ACTGCGAGCT 340

(2) INFORMATION FOR SEQ ID NO: 90:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 113 amino acids
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 90:

Ser Thr Val Thr Glu Arg Asp Val Gln Thr Glu His Asp Ile Tyr Gln
 1 5 10 15
 Cys Cys Lys Leu Glu Pro Ala Ala Arg Thr Ala Ile Thr Ser Leu Thr
 20 25 30
 Asp Arg Leu Tyr Xaa Gly Gly Pro Met Xaa Asn Ser Lys Gly Gln Ala
 35 40 45
 Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ile Leu
 50 55 60
 Ala Asn Thr Leu Thr Cys Tyr Leu Lys Ala Gln Ala Ala Cys Arg Ala
 65 70 75 80
 Ala Gly Leu Lys Asp Phe Asp Met Leu Val Cys Gly Asp Asp Leu Val

85	90	95	
Val Ile Ser Glu Ser Leu Gly Val Ser Glu Asp Thr Ser Ala Leu Arg	120	125	130

81a

(2) INFORMATION FOR SEQ ID NO: 91:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 340 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA
- iii) HYPOTHETICAL: NO
- ii) ANTI-SENSE: NO
- i) SEQUENCE DESCRIPTION: SEQ ID

CTCGACAGTC	ACCGAGCGCG	ACATCCRCAC	CGAGCACGAC	ATCTACCAAT	GCTGCCAACT	60
TGACCCGGTG	GCACCGCAAGG	CTATTACATC	TCTGACTGAG	CGGCTGTACT	GCGGWWGGCC	120
CATGATGAAC	TCCCCTGGTC	AATCATGTGG	ATACCGTAGG	TGCCGAGGCCA	GTGGCGTGCCT	180
CACCAACGAGC	TTGGGCAATA	CCCTAACATG	CTATTTGAAA	GCACAAGCAG	CGTGTAGGGC	240
ACCAAAAGCTC	AAAAAACTATG	ACATGTTAGT	CTGCGGAGAC	GATCTAGTCG	TTATCGCGGA	300
GAGTGGAGGA	GTCTCTGAGG	ATGTTGACGC	CCTGCGAGAC			340

(2) INFORMATION FOR SEQ ID NO: 92:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 113 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: peptide
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 92:

Ser Thr Val Thr Glu Arg Asp Ile Xaa Thr Glu His Asp Ile Tyr Glu
1 5 10 15

Cys Cys Gln Leu Asp Pro Val Ala Arg Lys Ala Ile Thr Ser Leu Thr
20 25 30

Glu Arg Leu Tyr Cys Xaa Gly Pro Met Met Asn Ser Arg Gly Gln Ser
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Leu
 50 55 60

Gly Asn Thr Leu Thr Cys Tyr Leu Lys Ala Gln Ala Ala Cys Arg Ala
65 70 75 80

Ala Lys Leu Lys Asn Tyr Asp Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Ala Glu Ser Gly Gly Val Ser Glu Asp Val Asp Ala Leu Arg
100 105 110

Ala

(2) INFORMATION FOR SEQ ID NO: 93:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 340 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 93:

CTCCTCCGTC	ACGGAGCGTG	ACATCCGCAC	TGAACACGAC	ATCTATCAGT	GCTGCCAATT	60
AGATCCGTA	GCACGGAAAG	CCATTACATC	TCTTACTGAG	CGGCTGTACT	GGGGCGGCC	120
CATGTACAAAC	TCTCGAGGTC	AGTCATGTGG	GTACCGCAGG	TGCCGGGCTA	GTGGTGTCTT	180
CACCAACAAAGC	TTGGGCAACA	CCATGACATG	CTACCTGAAG	GCTCAGGCGG	CTTGTAGGGC	240
AGCRAAGCTC	AAAAACTTTG	ACATGTTGGT	CTGCGGAGAC	GACCTAGTCG	TTATTCCTGA	300
GAGCGGAGGA	GTCCCTGAGG	ATGCCGGGCG	CCTGCGAGTC			340

(2) INFORMATION FOR SEQ ID NO: 94:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 113 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 94:

Ser	Ser	Val	Thr	Glu	Arg	Asp	Ile	Arg	Thr	Glu	His	Asp	Ile	Tyr	Gln
1							5			10					15
Cys	Cys	Gln	Leu	Asp	Pro	Val	Ala	Arg	Lys	Ala	Ile	Thr	Ser	Leu	Thr
							20			25					30
Glu	Arg	Leu	Tyr	Cys	Gly	Gly	Pro	Met	Tyr	Asn	Ser	Arg	Gly	Gln	Ser
							35			40					45
Cys	Gly	Tyr	Arg	Arg	Cys	Arg	Ala	Ser	Gly	Val	Phe	Thr	Thr	Ser	Leu
							50			55					60
Gly	Asn	Thr	Met	Thr	Cys	Tyr	Leu	Lys	Ala	Gln	Ala	Ala	Cys	Arg	Ala
							65			70					80
Xaa	Lys	Leu	Lys	Asn	Phe	Asp	Met	Leu	Val	Cys	Gly	Asp	Asp	Leu	Val
							85			90					95
Val	Ile	Ala	Glu	Ser	Gly	Gly	Val	Phe	Glu	Asp	Ala	Gly	Ala	Leu	Arg
							100			105					110
Val															

(2) INFORMATION FOR SEQ ID NO: 95:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 340 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 95:

ATCCACAGTC	ACGGGGCGCG	ACATACGCAC	AGAACNAGAC	ATTTACCTGT	CCTGCCAGCT	60
CGACCCAGAG	GCCCCGAAAG	CCATAAAGTC	TCTCACTGAG	AGGCTCTATG	TCGGGGGCC	120
TATGTACAAAC	TCAAAGGGCC	AACTCTGTGG	TCAACGCCGA	TGCCGAGCAA	GCGGAGTACT	180

CCCCACAAGC ATGGGTAACA CCATCACATG CTTCCCTGAAAG GCAACCCGCG CTTGCCGAGC 240
AGCCGGCTTT ACAGATTATG ACATGTTGGT CTGCGGAGAC GATTTGGTTG TCGTAACTGA 300
GAGTGCTGGA GTCAACGAGG ATATCGCTAA CCTGCGAGCC 340

(2) INFORMATION FOR SEQ ID NO: 96:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 113 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 96:

Ser Thr Val Thr Gly Arg Asp Ile Arg Thr Glu Lys Asp Ile Tyr Leu
1 5 10 15
Ser Cys Gln Leu Asp Pro Glu Ala Arg Lys Ala Ile Lys Ser Leu Thr
20 25 30
Glu Arg Leu Tyr Val Gly Gly Pro Met Tyr Asn Ser Lys Gly Gln Leu
35 40 45
Cys Gly Gln Arg Arg Cys Arg Ala Ser Gly Val Leu Pro Thr Ser Met
50 55 60
Gly Asn Thr Ile Thr Cys Phe Leu Lys Ala Thr Ala Ala Cys Arg Ala
65 70 75 80
Ala Gly Phe Thr Asp Tyr Asp Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95
Val Val Thr Glu Ser Ala Gly Val Asn Glu Asp Ile Ala Asn Leu Arg
100 105 110
Ala

(2) INFORMATION FOR SEQ ID NO: 97:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 340 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 97:

CTCCACTGTC ACTGAGCAGG ACATCAGGGT AGAACTTTCC ATCTTCAGG CCTGTGACCT 60
CAAGGACGAG GCTAGGAGGG TGATAACTTC ACTCACGGAG CGGCTTTACT GTGGTGGTCC 120
TATGTTCAAC AGCAAGGGAC AACACTGGGG TTACCGCCGC TGCCGTGCTA GTGGGGTGCT 180
ACCCACCAGC TTGGGAACA CAATCACCTG TTACATCAA GCAAAGGCAG CTACCAAAGC 240
TGCCGGAATT AAAAATCCAT CATTCTCTGT CTGCGGAGAT GACTTGGTCC TGATTGCTGA 300
GAGTGCAGGG ATCGATGAGG ACAAGAGCCC CTTGAGACCT 340

(2) INFORMATION FOR SEQ ID NO: 98:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 113 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 98:

Ser Thr Val Thr Glu Gln Asp Ile Arg Val Glu Leu Ser Ile Phe Gln
1 5 10 15

Ala Cys Asp Leu Lys Asp Glu Ala Arg Arg Val Ile Thr Ser Leu Thr
20 25 30

Glu Arg Leu Tyr Cys Gly Gly Pro Met Phe Asn Ser Lys Gly Gln His
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Pro Thr Ser Phe
50 55 60

Gly Asn Thr Ile Thr Cys Tyr Ile Lys Ala Lys Ala Ala Thr Lys Ala
65 70 75 80

Ala Gly Ile Lys Asn Pro Ser Phe Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Ala Glu Ser Ala Gly Ile Asp Glu Asp Lys Ser Ala Leu Arg
100 105 110

Ala

(2) INFORMATION FOR SEQ ID NO: 99:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 340 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 99:

CTCTACCGTC ACAGAGAGGG ACATACGGAC AGAAGAACCC ATCTATCTGT CTTGTCAATT 60
GCCTGAAGAG GCCCCGAAAG CCATTAATC GCTGACAGAG AGACTATAACG TGGGGGGCCC 120
GATGGAAAAC AGCAAGGGCC AGGCTTGCGG ATATAGGCGT TGCCGCCCAA GCGGGGTATT 180
CACCACAAAGC TTGGGAAACA CCATGACTTG TTACATCAA GCTAAACCGG CTTGTAAAGC 240
CGCTGGCATT GTAGACCCGG TGATGCTCGT GTGGGGGAGAC GACCTAGTGG TCATCTCAGA 300
AAGCAAGGGG GTGGAGGAGG ACCAGGGGA CCTACGGAGTC 340

(2) INFORMATION FOR SEQ ID NO: 100:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 113 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 100:

Ser Thr Val Thr Glu Arg Asp Ile Arg Thr Glu Glu Ser Ile Tyr Leu
1 5 10 15

Ser Cys Gln Leu Pro Glu Glu Ala Arg Lys Ala Ile Lys Ser Leu Thr
20 25 30

Glu Arg Leu Tyr Val Gly Gly Pro Met Glu Asn Ser Lys Gly Gln Ala
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Phe Thr Thr Ser Leu
50 55 60

Gly Asn Thr Met Thr Cys Tyr Ile Lys Ala Lys Ala Ala Cys Lys Ala
65 70 75 80

Ala Gly Ile Val Asp Pro Val Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Ser Glu Ser Lys Gly Val Glu Asp Gln Arg Asp Leu Arg
100 105 110

Val

(2) INFORMATION FOR SEQ ID NO: 101:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 335 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 101:

CTCCACTGTC ACTGAGAGAG ACATACGGAC AGAAGAACCC ATCTAYYTGG CTTGTCAATT	60
GCCCCGAAGAG GCCCGGAAGG CCATTAATTC ACTGACAGAG AGACTATACG TGGGGGGCCC	120
GATGGAAAAC AGCAAAGGCC AGGCCTGCGG ATATAGGCCT TGCCGCGCAA GCGGGGTATT	180
CACCAACAGC TTGGGGAAACA CCATGACTTG TTACATCAAG GCCAARGCAG CTTGTAAAGC	240
YGCTGGCATT GTTGACCCGG TGATGCTCGT GTGCGGCCAC GACCTAGTGG TCATCTCAGA	300
GAGCAAGGGG GTAGAGGAGG ACCAGCGAGA CCTAC	335

(2) INFORMATION FOR SEQ ID NO: 102:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 113 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 102:

Ser Thr Val Thr Glu Arg Asp Ile Arg Thr Glu Glu Ser Ile Xaa Xaa
1 5 10 15

Ala Cys Gln Leu Pro Glu Glu Ala Arg Lys Ala Ile Lys Ser Leu Thr
20 25 30

Glu Arg Leu Tyr Val Gly Gly Pro Met Glu Asn Ser Lys Gly Gln Ala
35 40 45

Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Phe Thr Thr Ser Leu
50 55 60

Gly Asn Thr Met Thr Cys Tyr Ile Lys Ala Xaa Ala Ala Cys Lys Xaa
65 70 75 80

Ala Gly Ile Val Asp Pro Val Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95

Val Ile Ser Glu Ser Lys Gly Val Glu Asp Gln Arg Asp Leu Xaa
100 105 110

Xaa

(2) INFORMATION FOR SEQ ID NO: 103:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 461 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 103:

CGTACAGCCT	CCAGGACCCC	CCCTCCCCGG	AGAGCCATAG	TGGTCTGCGG	AACCGGTGAG	60
TACACCGGAA	TTGCCGGGAA	GACTGGGTCC	TTTCTTGGAT	TAACCCACTC	TATGCCCGGA	120
GATTTGGGCG	TGCCCCCGCA	AGACTGCTAG	CCGAGTAGCG	TTGGGTTGCG	AAAGGCCTTG	180
TGGTACTGCC	TGATAGGGTG	CTTGCAGTG	CCCCGGGAGG	TCTCGTAGAC	CGTGCACCAT	240
GAGCACGAAT	CCTAACCTC	AAAGACAAAC	CAAAAGAAAC	ACCAACCGCC	GCCCACRAGGA	300
CGTTAACGTC	CCGGGGGTG	GCCAGATCGT	TGGCGGGGTG	TACTTGTGTC	CGCGCAGGGG	360
CCCCAGAGTG	GGTGTGCCGG	CGACGAGAAA	GACCTCGGAG	CGGTCCAGC	CGCGTGGGAG	420
GCGCCAACT	ATCCCCAAGG	TTAGGC3CAC	CACCGCCCGT	T		461

(2) INFORMATION FOR SEQ ID NO: 104:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 74 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 104:

Met	Ser	Thr	Asn	Pro	Lys	Pro	Gln	Arg	Gln	Thr	Lys	Arg	Asn	Thr	Asn
1															
							10							15	
Arg	Arg	Pro	Gln	Asp	Val	Lys	Phe	Pro	Gly	Gly	Gly	Gln	Ile	Val	Gly
							20						25		30
Gly	Val	Tyr	Leu	Leu	Pro	Arg	Arg	Gly	Pro	Arg	Val	Gly	Val	Arg	Ala
							35						40		45
Thr	Arg	Lys	Thr	Ser	Glu	Arg	Ser	Gln	Pro	Arg	Gly	Arg	Arg	Gln	Pro
							50						55		60
Ile	Pro	Lys	Val	Arg	Arg	Thr	Thr	Gly	Arg						
							65						70		

(2) INFORMATION FOR SEQ ID NO: 105:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 340 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 105:

CTCTACTGTC	ACAGAGAGGG	ATATACGAAC	AGAGGAATCC	ATYTATCTGG	CTTGTCAATT	60
GCCCCGAGAG	GCCCCGGAGG	CCATCAAATC	ACTGACAGAG	AGACATATAG	TGGGCCGCC	120
GATGGAAAAC	AGCAAGGGCC	AGGCCTGCGG	ATACAGGCCT	TGCCGCGCAA	GCGGGGTATT	180

CAACACAGC TTGGGGACA CCATGACTTG TTACATCAA GCCAAGGGGG CTTGTAAAGC 240
CGCTGGCATT GTTGACCCAG TGATGCTCGT GTGCGGGCAG GACCTAGTGG TCATCTCAGA 300
AAGCAAGGGG GTGGAGGAGG ACCAACGAGA CCTACGANTC 340

(2) INFORMATION FOR SEQ ID NO: 106:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 113 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 106:

Ser Thr Val Thr Glu Arg Asp Ile Arg Thr Glu Glu Ser Xaa Tyr Leu
1 5 10 15
Ala Cys Gln Leu Pro Glu Glu Ala Arg Lys Ala Ile Lys Ser Leu Thr
20 25 30
Glu Arg Leu Tyr Val Gly Gly Pro Met Glu Asn Ser Lys Gly Gln Ala
35 40 45
Cys Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Phe Thr Thr Ser Leu
50 55 60
Gly Asn Thr Met Thr Cys Tyr Ile Lys Ala Lys Ala Ala Cys Lys Ala
65 70 75 80
Ala Gly Ile Val Asp Pro Val Met Leu Val Cys Gly Asp Asp Leu Val
85 90 95
Val Ile Ser Glu Ser Lys Gly Val Glu Glu Asp Gln Arg Asp Leu Arg
100 105 110

Xaa

(2) INFORMATION FOR SEQ ID NO: 107:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 107:

Ala Arg Gln Ser Asp Gly Arg Ser Trp Ala Gln
1 5 10

(2) INFORMATION FOR SEQ ID NO: 108:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 108:

Ala Arg Arg Ser Glu Gly Arg Ser Trp Ala Gln
1 5 10

(2) INFORMATION FOR SEQ ID NO: 109:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 109:

Glu Arg Arg Pro Glu Gly Arg Ser Trp Ala Gln
1 5 10

(2) INFORMATION FOR SEQ ID NO: 110:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 11 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 110:

Ala Arg Arg Pro Glu Gly Arg Ser Trp Ala Gln
1 5 10

(2) INFORMATION FOR SEQ ID NO: 111:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 11 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 111:

Asp Arg Arg Thr Thr Gly Lys Ser Trp Gly Arg
1 5 10

(2) INFORMATION FOR SEQ ID NO: 112:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 11 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 112:

Asp Arg Arg Ala Thr Gly Arg Ser Trp Gly Arg
1 5 10

(2) INFORMATION FOR SEQ ID NO: 113:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 11 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 113:

Asp Arg Arg Ala Thr Gly Lys Ser Trp Gly Arg
1 5 10

(2) INFORMATION FOR SEQ ID NO: 114:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 11 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 114:

Val Arg Gln Pro Thr Gly Arg Ser Trp Gly Gln
1 5 10

(2) INFORMATION FOR SEQ ID NO: 115:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 115:

Val Arg His Gln Thr Gly Arg Thr Trp Ala Gln
1 5 10

(2) INFORMATION FOR SEQ ID NO: 116:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 116:

Val Arg Gln Asn Gln Gly Arg Thr Trp Ala Gln
1 5 10

(2) INFORMATION FOR SEQ ID NO: 117:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 117:

Ala Arg Arg Thr Glu Gly Arg Ser Trp Ala Gln
1 5 10

(2) INFORMATION FOR SEQ ID NO: 118:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 118:

Val Arg Arg Thr Thr Gly Arg Xaa Xaa Xaa Xaa
1 5 10

(2) INFORMATION FOR SEQ ID NO: 119:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 119:

Val Arg Arg Thr Thr Gly Arg Thr Trp Ala Gln
1 5 10

(2) INFORMATION FOR SEQ ID NO: 120:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 12 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 120:

His Glu Val Arg Asn Ala Ser Gly Val Tyr His Val
1 5 10

(2) INFORMATION FOR SEQ ID NO: 121:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 12 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 121:

His Glu Val Arg Asn Ala Ser Gly Val Tyr His Leu
1 5 10

(2) INFORMATION FOR SEQ ID NO: 122:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 12 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 122:

Tyr Glu Val His Ser Thr Thr Asp Gly Tyr His Val
1 5 10

(2) INFORMATION FOR SEQ ID NO: 123:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 12 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 123:

Val Glu Val Lys Asn Thr Ser Gln Ala Tyr Met Ala
1 5 10

(2) INFORMATION FOR SEQ ID NO: 124:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 12 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 124:

Ile Gln Val Lys Asn Asn Ser His Phe Tyr Met Ala
1 5 10

(2) INFORMATION FOR SEQ ID NO: 125:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 12 amino acids

(B) TYPE: amino acid
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: peptide
(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 125:
Val Gln Val Lys Asn Thr Ser Thr Met Tyr Met Ala
1 5 10

(2) INFORMATION FOR SEQ ID NO: 126:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 12 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: peptide
(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 126:
Val Gln Val Lys Asn Thr Ser His Ser Tyr Met Val
1 5 10

(2) INFORMATION FOR SEQ ID NO: 127:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 12 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: peptide
(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 127:
Val Gln Val Ala Asn Arg Ser Gly Ser Tyr Met Val
1 5 10

(2) INFORMATION FOR SEQ ID NO: 128:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 12 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: peptide
(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 128:
Val Glu Ile Lys Asn Thr Xaa Asn Thr Tyr Val Leu
1 5 10

(2) INFORMATION FOR SEQ ID NO: 129:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 12 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: peptide
(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 129:
Val Glu Ile Lys Asn Thr Ser Asn Thr Tyr Val Leu
1 5 10

(2) INFORMATION FOR SEQ ID NO: 130:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 12 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 130:

Ile Asn Tyr Arg Asn Val Ser Gly Ile Tyr Tyr Val
1 5 10

(2) INFORMATION FOR SEQ ID NO: 131:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 12 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 131:

Ile Asn Tyr Arg Asn Thr Ser Gly Ile Tyr His Val
1 5 10

(2) INFORMATION FOR SEQ ID NO: 132:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 12 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 132:

Ile Asn Tyr His Asn Thr Ser Gly Ile Tyr His Ile
1 5 10

(2) INFORMATION FOR SEQ ID NO: 133:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 12 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 133:

Thr Asn Tyr Arg Asn Val Ser Gly Ile Tyr His Val
1 5 10

(2) INFORMATION FOR SEQ ID NO: 134:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 12 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 134:

Gln His Tyr Arg Asn Val Ser Gly Ile Tyr His Val
1 5 10

(2) INFORMATION FOR SEQ ID NO: 135:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 12 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 135:

Ile Gln Val Lys Asn Ala Ser Gly Ile Tyr His Leu

1 5 10

(2) INFORMATION FOR SEQ ID NO: 136:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 12 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 136:

Ala His Tyr Thr Asn Lys Ser Gly Leu Tyr His Leu
1 5 10

(2) INFORMATION FOR SEQ ID NO: 137:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 12 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 137:

Leu Asn Tyr Ala Asn Lys Ser Gly Leu Tyr His Leu
1 5 10

(2) INFORMATION FOR SEQ ID NO: 138:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 12 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 138:

Leu Glu Tyr Arg Asn Ala Ser Gly Leu Tyr Met Val
1 5 10

(2) INFORMATION FOR SEQ ID NO: 139:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 11 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 139:

Ile Tyr Glu Met Asp Gly Met Ile Met His Tyr
1 5 10

(2) INFORMATION FOR SEQ ID NO: 140:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 11 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 140:

Ile Tyr Glu Met Ser Gly Met Ile Leu His Ala
1 5 10

(2) INFORMATION FOR SEQ ID NO: 141:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 141:

Val Tyr Glu Ala Lys Asp Ile Ile Leu His Thr
1 5 10

(2) INFORMATION FOR SEQ ID NO: 142:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 142:

Val Trp Gln Leu Xaa Asp Ala Val Leu His Val
1 5 10

(2) INFORMATION FOR SEQ ID NO: 143:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 143:

Val Trp Gln Leu Arg Asp Ala Val Leu His Val
1 5 10

(2) INFORMATION FOR SEQ ID NO: 144:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 144:

Ile Trp Gln Met Gln Gly Ala Val Leu His Val
1 5 10

(2) INFORMATION FOR SEQ ID NO: 145:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 145:

Val Trp Gln Leu Lys Asp Ala Val Leu His Val
1 5 10

(2) INFORMATION FOR SEQ ID NO: 146:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11 amino acids
(B) TYPE: amino acid

(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: peptide
(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 146:
Val Trp Gln Leu Glu Glu Ala Val Leu His Val
1 5 10

(2) INFORMATION FOR SEQ ID NO: 147:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: peptide
(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 147:
Thr Trp Gln Leu Xaa Xaa Ala Val Leu His Val
1 5 10

(2) INFORMATION FOR SEQ ID NO: 148:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: peptide
(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 148:
Val Tyr Glu Ala Asp His His Ile Leu His Leu
1 5 10

(2) INFORMATION FOR SEQ ID NO: 149:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: peptide
(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 149:
Val Tyr Glu Ala Asp His His Ile Leu Ala Leu
1 5 10

(2) INFORMATION FOR SEQ ID NO: 150:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: peptide
(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 150:
Val Phe Glu Ala Asp His His Ile Leu His Leu
1 5 10

(2) INFORMATION FOR SEQ ID NO: 151:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 151:

Val Tyr Glu Ser Asp His His Ile Leu His Leu
1 5 10

(2) INFORMATION FOR SEQ ID NO: 152:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 152:

Val Phe Glu Glu Thr Met Ile Leu His Leu
1 5 10

(2) INFORMATION FOR SEQ ID NO: 153:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 153:

Val Tyr Glu Ala Glu Thr Leu Ile Leu His Leu
1 5 10

(2) INFORMATION FOR SEQ ID NO: 154:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 154:

Val Tyr Glu Ala Asn Gly Met Ile Leu His Leu
1 5 10

(2) INFORMATION FOR SEQ ID NO: 155:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 155:

Val Tyr Glu Ala Gly Asp Ile Ile Leu His Leu
1 5 10

(2) INFORMATION FOR SEQ ID NO: 156:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 13 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 156:

Val Arg Glu Asp Asn His Leu Arg Cys Trp Met Ala Leu
1 5 10

(2) INFORMATION FOR SEQ ID NO: 157:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 13 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 157:

Val Arg Glu Asn Asn Ser Ser Arg Cys Trp Met Ala Leu
1 5 10

(2) INFORMATION FOR SEQ ID NO: 158:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 13 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 158:

Ile Arg Glu Gly Asn Ile Ser Arg Cys Trp Val Leu Pro
1 5 10

(2) INFORMATION FOR SEQ ID NO: 159:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 13 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 159:

Glu Asn Ser Ser Gly Arg Phe His Cys Trp Ile Pro Ile
1 5 10

(2) INFORMATION FOR SEQ ID NO: 160:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 13 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 160:

Glu Arg Ser Gly Asn Arg Thr Phe Cys Trp Thr Ala Val
1 5 10

(2) INFORMATION FOR SEQ ID NO: 161:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 13 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 161:

Glu Leu Gln Gly Asn Lys Ser Arg Cys Trp Ile Pro Val
1 5 10

(2) INFORMATION FOR SEQ ID NO: 162:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 13 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 162:

Glu Arg His Gln Asn Gln Ser Arg Cys Trp Ile Pro Val
1 5 10

(2) INFORMATION FOR SEQ ID NO: 163:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 13 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 163:

Glu Trp Lys Asp Asn Thr Ser Arg Cys Trp Ile Pro Val
1 5 10

(2) INFORMATION FOR SEQ ID NO: 164:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 13 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 164:

Glu Arg Glu Gly Asn Ser Ser Arg Cys Trp Ile Pro Val
1 5 10

(2) INFORMATION FOR SEQ ID NO: 165:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 13 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 165:

Val Arg Glu Gly Asn Gln Ser Arg Cys Trp Val Ala Leu
1 5 10

(2) INFORMATION FOR SEQ ID NO: 166:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 13 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 166:

Val Arg Thr Gly Asn Gln Ser Arg Cys Trp Val Ala Leu
1 5 10

(2) INFORMATION FOR SEQ ID NO: 167:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 13 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 167:

Val Arg Val Gly Asn Gln Ser Ser Cys Trp Val Ala Leu
1 5 10

(2) INFORMATION FOR SEQ ID NO: 168:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 13 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 168:

Val Arg Val Gly Asn Gln Ser Arg Cys Trp Val Ala Leu
1 5 10

(2) INFORMATION FOR SEQ ID NO: 169:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 13 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 169:

Val Lys Glu Gly Asn His Ser Arg Cys Trp Val Ala Leu
1 5 10

(2) INFORMATION FOR SEQ ID NO: 170:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 13 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 170:

Val Lys Thr Gly Asn Thr Ser Arg Cys Trp Val Ala Leu
1 5 10

(2) INFORMATION FOR SEQ ID NO: 171:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 13 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 171:

Ile Lys Ala Gly Asn Glu Ser Arg Cys Trp Leu Pro Val
1 5 10

(2) INFORMATION FOR SEQ ID NO: 172:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 13 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 172:

Val Lys Xaa Xaa Asn Gln Ser Arg Cys Trp Val Gln Ala
1 5 10

(2) INFORMATION FOR SEQ ID NO: 173:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 13 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 173:

Val Lys Thr Gly Asn Leu Thr Lys Cys Trp Leu Ser Ala
1 5 10

(2) INFORMATION FOR SEQ ID NO: 174:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 13 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 174:

Val Arg Ser Gly Asn Thr Ser Arg Cys Trp Ile Pro Val
1 5 10

(2) INFORMATION FOR SEQ ID NO: 175:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 175:

Val Lys Asn Ala Ser Val Pro Thr Ala Ala
1 5 10

(2) INFORMATION FOR SEQ ID NO: 176:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 176:

Val Lys Asp Ala Asn Val Pro Thr Ala Ala
1 5 10

(2) INFORMATION FOR SEQ ID NO: 177:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 177:

Ala Arg Ile Ala Asn Ala Pro Ile Asp Glu
1 5 10

(2) INFORMATION FOR SEQ ID NO: 178:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 178:

Val Ser Lys Pro Gly Ala Leu Thr Lys Gly
1 5 10

(2) INFORMATION FOR SEQ ID NO: 179:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 179:

Val Ser Arg Pro Gly Ala Leu Thr Arg Gly
1 5 10

(2) INFORMATION FOR SEQ ID NO: 180:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 180:

Val Asn Gln Pro Gly Ala Leu Thr Arg Gly
1 5 10

(2) INFORMATION FOR SEQ ID NO: 181:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 181:

Val Ser Gln Pro Gly Ala Leu Thr Arg Gly
1 5 10

(2) INFORMATION FOR SEQ ID NO: 182:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 182:

Val Ser Gln Pro Gly Ala Leu Thr Lys Gly
1 5 10

(2) INFORMATION FOR SEQ ID NO: 183:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(iii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 183:

Val Ser Arg Pro Gly Ala Leu Thr Glu Gly
1 5 10

(2) INFORMATION FOR SEQ ID NO: 184:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(iii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 184:

Ala Pro Tyr Ile Gly Ala Pro Leu Glu Ser
1 5 10

(2) INFORMATION FOR SEQ ID NO: 185:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(iii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 185:

Ala Pro Tyr Thr Ala Ala Pro Leu Glu Ser
1 5 10

(2) INFORMATION FOR SEQ ID NO: 186:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(iii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 186:

Ala Pro Ile Leu Ser Ala Pro Leu Met Ser
1 5 10

(2) INFORMATION FOR SEQ ID NO: 187:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(iii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 187:

Val Pro Asn Ser Ser Val Pro Ile His Gly
1 5 10

(2) INFORMATION FOR SEQ ID NO: 188:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 188:

Val Pro Asn Ala Ser Thr Pro Val Thr Gly
1 5 10

(2) INFORMATION FOR SEQ ID NO: 189:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 189:

Val Gln Asn Ala Ser Val Ser Ile Arg Gly
1 5 10

(2) INFORMATION FOR SEQ ID NO: 190:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 190:

Val Lys Ser Pro Cys Ala Ala Thr Ala Ser
1 5 10

(2) INFORMATION FOR SEQ ID NO: 191:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 191:

Ser Pro Arg Met His His Thr Thr Gln Glu
1 5 10

(2) INFORMATION FOR SEQ ID NO: 192:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 192:

Ser Pro Arg Leu Tyr His Thr Thr Gln Glu
1 5 10

(2) INFORMATION FOR SEQ ID NO: 193:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 193:

Thr Ser Arg Arg His Trp Thr Val Gln Asp
1 5 10

(2) INFORMATION FOR SEQ ID NO: 194:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 194:

Ala Pro Lys Arg His Tyr Phe Val Gln Glu
1 5 10

(2) INFORMATION FOR SEQ ID NO: 195:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 195:

Ser Pro Gln Tyr His Thr Phe Val Gln Glu
1 5 10

(2) INFORMATION FOR SEQ ID NO: 196:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 196:

Ser Pro Gln His His Asn Phe Ser Gln Asp
1 5 10

(2) INFORMATION FOR SEQ ID NO: 197:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 197:

Ser Pro Gln His His Ile Phe Val Gln Asp
1 5 10

(2) INFORMATION FOR SEQ ID NO: 198:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 198:

Ser Pro Glu His His His Phe Val Gln Asp
1 5 10

(2) INFORMATION FOR SEQ ID NO: 199:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 199:

Arg Pro Arg Arg His Trp Thr Thr Gln Asp
1 5 10

(2) INFORMATION FOR SEQ ID NO: 200:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 200:

Arg Pro Arg Arg His Trp Thr Ala Gln Asp
1 5 10

(2) INFORMATION FOR SEQ ID NO: 201:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 201:

Gln Pro Arg Arg His Trp Thr Thr Gln Asp
1 5 10

(2) INFORMATION FOR SEQ ID NO: 202:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 202:

Arg Pro Arg Arg His Trp Thr Thr Gln Glu
1 5 10

(2) INFORMATION FOR SEQ ID NO: 203:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 203:

Gln Pro Arg Arg His Trp Thr Val Gln Asp
1 5 10

(2) INFORMATION FOR SEQ ID NO: 204:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids

(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 204:

Arg Pro Lys Tyr His Gln Val Thr Gln Asp
1 5 10

(2) INFORMATION FOR SEQ ID NO: 205:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 205:

Arg Pro Arg Met His Gln Val Val Gln Glu
1 5 10

(2) INFORMATION FOR SEQ ID NO: 206:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 206:

Arg Pro Arg Met Tyr Glu Ile Ala Gln Asp
1 5 10

(2) INFORMATION FOR SEQ ID NO: 207:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 207:

Arg His Arg Gln His Trp Thr Val Gln Asp
1 5 10